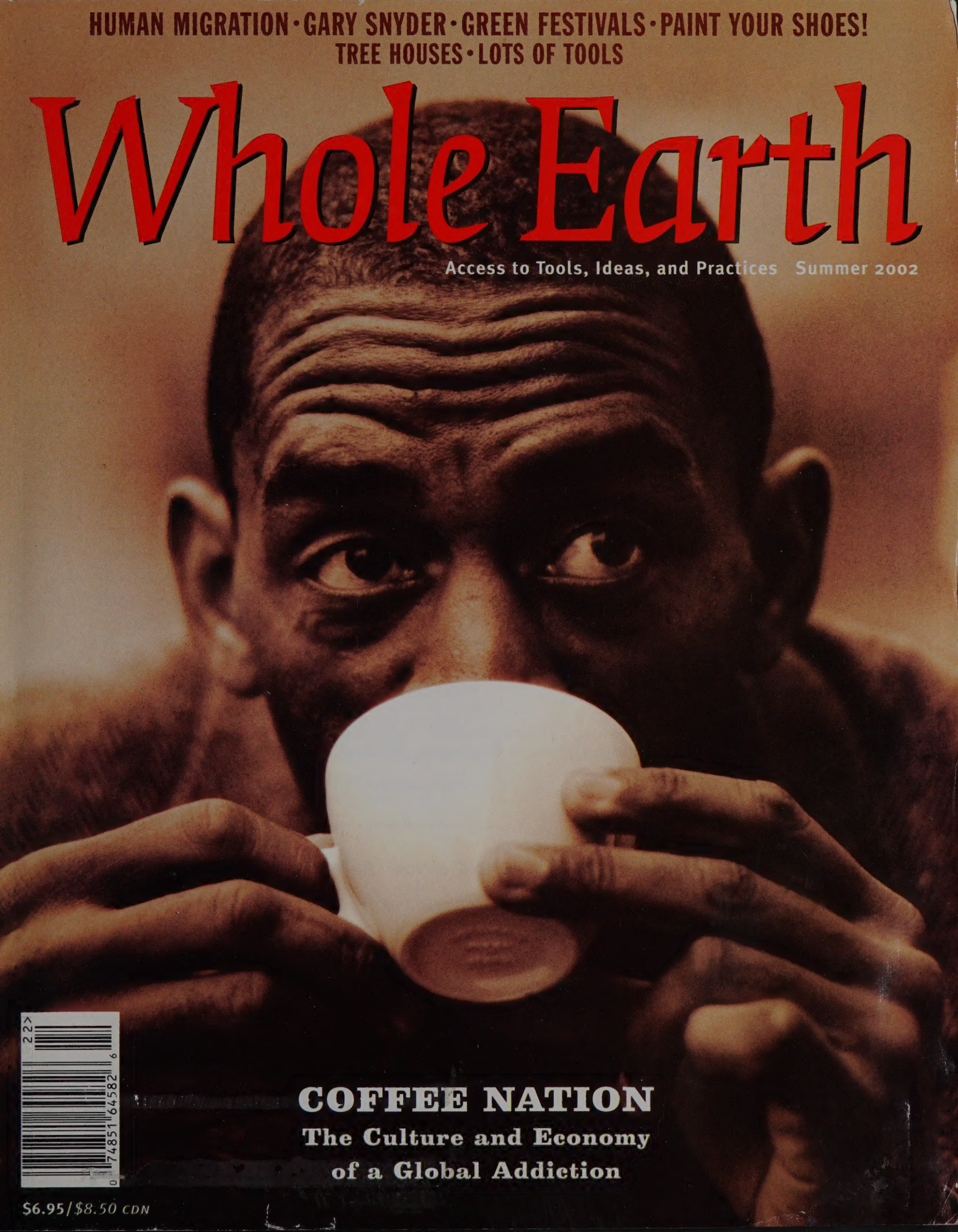


HUMAN MIGRATION • GARY SNYDER • GREEN FESTIVALS • PAINT YOUR SHOES!
TREE HOUSES • LOTS OF TOOLS

Whole Earth

Access to Tools, Ideas, and Practices Summer 2002



COFFEE NATION
The Culture and Economy
of a Global Addiction

\$6.95/\$8.50 CDN



MASTER *of* ARTS EARTH LITERACY

Saint Mary-of-the-Woods College

- DISTANCE LEARNING FORMAT
LIMITED TIME ON CAMPUS

- MULTI-DISCIPLINARY
COURSEWORK

Natural and Social Sciences,
Humanities, Spirituality & the Arts

- INTERNSHIPS AND ELECTIVES
Options for emphasis in Business,
Environmental Work, Political Organizing,
Education or Spiritual Ministry.

"I went to the woods because I wished to live deliberately, to front only the essential facts of life, and see if I could not learn what it had to teach."

-Henry David Thoreau

For more information, contact:

Mary Lou Dolan, CSJ

Saint Mary-of-the-Woods College

Saint Mary-of-the-Woods, IN 47876

elm@smwc.edu • (812) 535-5160 • www.smwc.edu



Table of Contents

Coffee Nation

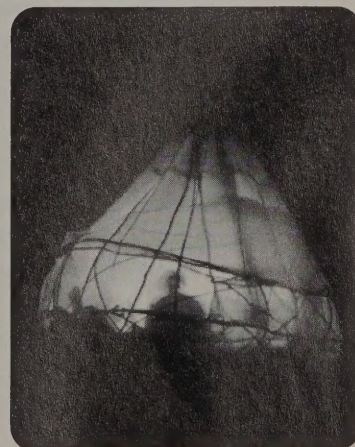
- 3 **Publisher's Statement** • *David Bolling*
- 4 **Coffee Nation** • *Whole Earth staff*
- 7 **Goatherds, Smugglers, and Revolutionaries** • *Dale Pendell*
A history of coffee.
- 10 **Café Culture** • *Buzz Poole*
The allure of the coffeehouse.
- 11 **Cupping: Don't Try This at Home, Kids** • *David Bolling*
Slurping and spitting with the *Whole Earth* staff
- 12 **The Economy of Coffee** • *Donald N. Schoenholt*
Supply glut, crashing prices, desperate farmers: what's the solution?
- 15 **Starbucks: To Drink or Not to Drink?** • *Whole Earth staff*
Globalizing predator or company with a conscience?
- 16 **Children: The Other Side of the "Coffee Tour"** • *Emily Polk*
Thousands of children working in horrifying conditions.
- 18 **Kona: Handmade Volcanic Coffee** • *Stephanie Guyer-Stevens*
Can America's coffee offer a model for sustainability?
- 22 **On Habit & Habitat: The Many Shades of Shade** • *Dan Imhoff*
For bird-friendly habitat, not all shade is equal.
- 25 **Coffee, Certification, and Consumers** • *Mark Inman*
Fair Trade, certified organic, shade grown: what's in a label?
- 28 **Coffee and Health: Good to the Last Drop?** • *Thalia DeWolf*
Is coffee a tonic, or a toxic brew? If the question is confusing, so are the answers.
- 31 **Java without the Jive** • *Thalia DeWolf*
Coffee substitutes: which ones are the best?
- 32 **Shaky Grounds** • *Dale Pendell*
The pharmacology of coffee.



PAGE 16

Other Features

- 39 **Human Flow** • *Peter Warshall*
What makes global migrations in our time unique.
- 45 **Erasing Borders** • *Gary Snyder*
A bioregional approach to human migration on Turtle Island.
- 51 **From Watersheds to Words** • *Cherine Badawi*
River of Words looks at the planet through the poems and pictures of children.
- 57 **The Merchants of Cool**
"Cool hunters' seek us out for our opinions, then sell them back to us."
- 62 **Great Green Gatherings** • *David Kupfer*
Green faires, festivals, and environmental expos sprout around the world.



PAGE 62

Managing Editor
Michael K. Stone

Associate Editor
Emily Polk

Guest Editor, Coffee Section
Stephanie Guyer-Stevens

Editor at Large
Peter Warshall

Contributing Editors
J. Baldwin, Linda Connor,
Dan Imhoff

Designers
Stefan Gutermuth
Deborah Tibbetts

Editorial Intern
Cherine Badawi

Publisher David Bolling
Business Manager Devon King

Development Director
Stephanie Guyer-Stevens

Advertising Director
Ray Whelan

Bookkeeper Cynthia Ganey

Accountant Pamela Netzwow

Advertising Sales
415/256-2800, ext. 225.

Point Foundation Board
Sunita Dutt, Diana Hadley,
Robert Hillman, Ron Pernick,
Danica Remy

Founder
Stewart Brand

Editorial Board
Steve Barnett, Sue Hall,
Wes Jackson, Jaron Lanier,
Pete Lavigne, Jerry Mander,
Vijaya Nagarajan, Sharyle
Patton, Godfrey Reggio,
Wolfgang Sachs, Gary
Snyder, Andrew Weil

Address all editorial and business
inquiries to: *Whole Earth*,
1408 Mission Avenue,
San Rafael, CA 94901-1971.
Email: info@wholeearthmag.com

SUBSCRIPTIONS: In US \$24;
in Canada \$32 (includes postage
and GST); elsewhere \$39 (US
funds). For customer service,
write *Whole Earth*, PO Box 3000,
Denville, NJ 07834-9879, or call
888/732-6739.

Whole Earth (ISSN 0749-5056) is
published quarterly by Point
Foundation, a nonprofit educa-
tional organization, 1408 Mission
Avenue, San Rafael, CA 94901-
1971 (415/256-2800). Periodicals
postage paid at San Rafael, CA
and additional mailing offices.
POSTMASTER: send address
changes to *Whole Earth*, PO Box
3000, Denville, NJ 07834-9879.
Copyright © 2002 by Point.
Printed in USA.



PAGE 79



PAGE 86



PAGE 74

- 67 **West Meets East** • *Robbie Hanna Anderman*
A new hybrid marries Western and shakuhachi flutes.
- 69 **Painted Shoes Manifesto** • *Howard Rheingold*
Improve the world! Paint your shoes!
- 74 **Branching Out** • *Suki Casanave*
Tree houses for everyone.
- 79 **Songs of Experience** • *Peter Harper*
Three decades at Wales's Centre for Alternative Technology.
- 88 **Accountable Predictions** • *Kevin Kelly*
Long Bets: Back your prescience with your pocketbook.

Coffee Resources

- 17 Child Labor • 27 Fair Trade, Shade Grown, Kona, More • 30 Health • 34 Grinders • 35 Royal Coffee Maker • The Great Coffee Book • 36 Fresh Roast Home Roaster • The Coffee Project • Home Coffee Roasting • 37 The Coffee Book • Uncommon Grounds

Books & Tools

- 38 Pharmako/Dynamis
- 44 World Refugee Survey 2002 • The State of the World's Refugees
• The Age of Migration
- 46 The Great Human Migrations • The Penguin Atlas of Diasporas
• Global Diasporas • New Diasporas
- 48 Migrations • The Children
- 56 greenmuseum.org
- 66 Herbal Gatherings • Holidays, Festivals & Celebrations • Great Festivals
- 68 Happy's Head Trip • Ultralight Sports Toothbrush • Nuckles
- 70 Profile tracing gauges, curved scraper blades, brass bevel finder, clean-out
chisels, geared lug nut remover, draft guard, constrictor strap wrench, best
pick-up tool, non-contact thermometer, GarrettWade catalog
- 72 Japanese brush knife • Tramontina machete • banana knife • Shindaiwa weed
whipper • Japanese mattock • OD pick • hand sickle • grass sickle • Japanese
Hori Hori • circlehoe • Rogue hoe, garden hoe, and push hoe • tool outlets
- 75 Out 'n' About Treesort & Treehouse Institute
- 77 Tree House Books
- 78 Traveling Light • Making the World Safe for Tourism • Infiltration
- 84 Colors • (Un)fashion
- 86 Collapsible • ecoDesign • Buckminster Fuller • Fabrication
- 89 The New Oxford Book of Food Plants
- 90 Lichens of North America • The Hemp Report • Ultimate Orchid
- 92 Human Natures • Tinkering with Eden
• The Evolution Explosion • The Spirit in the Gene
- 94 Widening Circles • The Love of Nature and the End of the World
- 95 21 Leaders for the 21st Century • Rise and Decline of the State

Backmatter

- 96 Letters
- 101 Gossip • Reviewers
- 102 Classifieds • Thanks
- 104 Maniacals • Donors

Green Turtles, Coffee Beans, and a \$1,000 Surprise

Welcome to Lesson 108; let's connect some dots. Green turtles, coffee beans, global migrations, dissolving borders, a River of Words, hand-painted shoes, an unemployed single mother with a thousand-dollar surprise.

I'll start with the turtles, because I can't shake the recent experience of spending hours off the coast of Kauai, watching green turtles as big as kitchen sinks graze on sea grass and admiring the ancient serenity in their eyes. Sea turtles have been on the planet for more than 150 million years, so long that they witnessed both the evolution and the extinction of the dinosaurs.

Despite their long history, all eight sea turtle species are endangered. During our lifetimes, we may witness the point of their terminal decline. Egg poaching, shrimp fishing practices, habitat destruction, and disease proliferation, in an ocean pushed out of chemical and thermal balance, will be responsible—all the result of human activity.

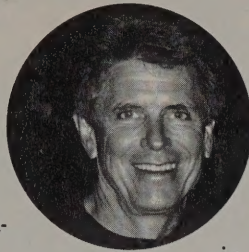
I was struck by the irony that we lavish so much attention on dinosaurs—prehistoric creatures that no longer exist except in Jurassic Park fantasies filmed near where I watched the turtles—while allowing the loss of real prehistoric creatures still among us. Will some future Spielberg film a sea turtle saga after the last one's gone?

On to coffee beans (page 4), a commodity we cover here in considerable detail. Until now I had no idea how important coffee really is, that it represents the intersection of numerous global economic, ecological, cultural, and chemical issues, and perfectly reflects the promise and the problems of sustainability.

Insights from Peter Warshall (page 39) and Gary Snyder (page 45) on the flow of human migration remind us that "home" is increasingly not a single place but an entire planet with permeable borders, where bioregions may someday define us as much as politics and language.

Place is further defined by poets and artists as young as eight who describe the world through a project called River of Words (page 51) that weaves education, nature, poetry, and art into a tapestry of global community. Their eloquence and insights may move you to a river of tears.

The hallmark of *Whole Earth* and its readers has been to celebrate and give access to people taking small and big actions to make their world a better place. This issue is no exception, with attention covering move-



ments from Fair Trade and shade grown coffee (pages 22 and 25) to Peter Harper's candid assessment (page 79) of successes, failures, and lessons learned at the Centre for Alternative Technology, founded in Wales in 1974.

We've always believed that making a better world and bringing and sharing joy and beauty are two sides of one endeavor. Hence articles on "Great Green Gatherings" (page 62), Robbie Anderman's hybrid shakuhachi/Western flute (page 67), tree houses (page 74) and Howard Rheingold's "Paint Your Shoes" manifesto (page 69).

These and the other themes inside this issue are united by our expanding knowledge that everything we create, buy, grow, paint, play, protect, or ignore connects us to each other and to all life on the planet.

Meanwhile we're busy making *Whole Earth* a more sustainable, self-sufficient magazine, with a voice that reaches a vastly expanded community of readers. In two recent appeals we've asked for your help in that effort and you've come through brilliantly. Our winter appeal brought in more than \$40,000, and our spring letter has generated more than \$15,000 so far (through May). Which leads me to the thousand-dollar surprise. An unemployed single mother, responding to our most recent appeal, said that she figured that we've "teetered on the brink of unemployment all the time," but that we nevertheless follow our "creative aspirations like a tick on a bloodhound." She sent us a thousand dollars, "an investment in both our futures."

Another reader made an equally moving donation with a check for five dollars. Doesn't sound like much, but when it's all you can afford, it's a lot, and the fact she bothered at all suggests a powerful commitment. That kind of commitment is further revealed in the hundreds of responses we've gotten to our reader survey, published in #107 and online at www.wholeearth.com. We're about to begin the long job of compiling and interpreting the results, and we'll soon tell you what you told us.

All of this reveals a readership united around the vision of a world in balance, where some people paint their shoes and sea turtles are allowed to thrive.

David Boling



PHOTOS COURTESY JOHN C. RUSSELL.



COFFEE NATION

Coffee consumers constitute a global nation. From the hills of Ethiopia, where it may have originated, to the java joints of Seattle where it may be most successfully marketed, the ubiquitous bean creates a diverse community. It may be the most universally used legal drug on the planet, beloved by hundreds of millions of people whose shared consumption unites them across political and geographic boundaries.

This multinational addiction has driven coffee into a pivotal role in the global economy, making it the largest agricultural commodity in the world. The fiscal health of entire countries is linked to its fluctuating market value. The impact of coffee reaches from the volcanic vistas of Kona to the industrial plantations of Vietnam, drawing webs of connection that penetrate and help shape cultures and economies around the globe.

As citizens of Coffee Nation, we found ourselves drawn to many questions about its social and natural ecology. This issue, under the direction of guest editor Stephanie Guyer-Stevens, is our effort to answer many of them.

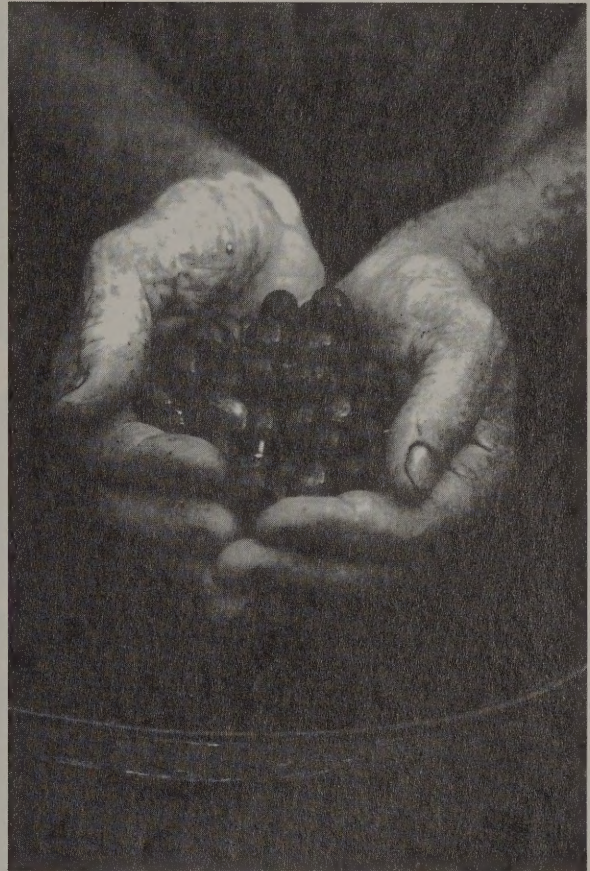
How did this Abyssinian bean become a global superstar?

Where does a dollar spent on coffee go? How large is the coffee economy, and who controls it?

How do coffee cherries in Guatemala become French Roast at Peet's? What are the steps from bean to cup, and the economic and environmental impacts along the way?

Is happy and healthy Juan Valdez, leading his burro through the coffee fields of Colombia, the true face of a typical coffee producer, or a misleading marketing myth? Did Third-World children really pick the beans for my double latte?

What do "Fair Trade," "shade grown," and "certified organic" mean, and do they make a difference to birds and farmers?



Does America's homegrown Kona coffee provide a model for sustainable cultivation?

Is Starbucks a threat to your neighborhood coffee house? an evil juggernaut, or a progressive company?

What's the pharmacology behind that buzz? Are your four cups of coffee a day good for you, or are you committing caffeine suicide?

What about hot-drink substitutes for the coffee-averse? Are they any good?

If you aren't ready to renounce your Coffee Nation citizenship, who has the best tools for grinding and roasting your own?

Drink up, and read on.

— The Whole Earth Staff

Sentiment without **ACTION** is the Ruin of the **SOUL**

~ edward abbey

Thank you for taking action.

Only 20 percent of the Earth's old growth forests remain intact today.

These majestic treasures have been cut at an alarming rate in recent years, only to be turned into products like lawn chairs, toilet paper and disposable office supplies. However, as a result of public pressure from people like you, some 300 companies including Home Depot, Kinko's, and top homebuilder Kaufman & Broad have committed to rapidly phase out their sale or use of wood from endangered forests. These corporations make up some 25 percent of the wood market in the U.S., and the numbers continue to grow. Today's transformation in the wood market means that tomorrow our ancient forests may still be standing.

Your action can make a difference.

With your help, we at Rainforest Action Network can continue to move old growth products out of the U.S. marketplace and protect the planet's last ancient forests. Please send your contribution today.



**RAINFOREST
ACTION NETWORK**

221 PINE STREET, SUITE 500
SAN FRANCISCO, CA 94104
(415) 398-4404 WWW.RAN.ORG



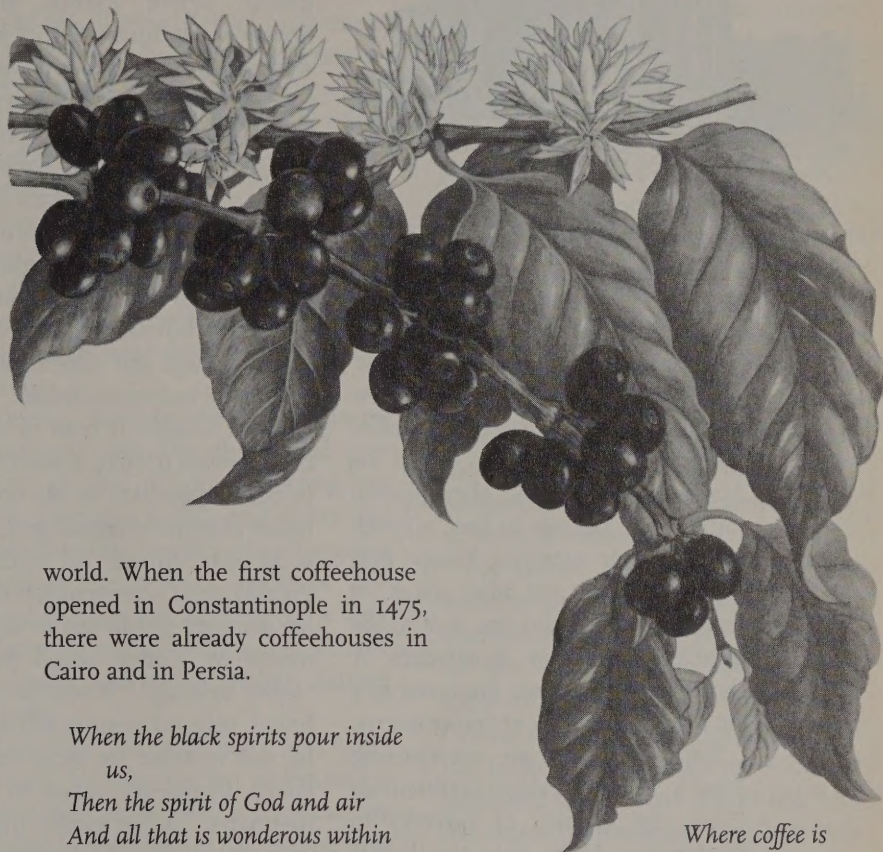
Goatherds, Smugglers, and Revolutionaries: A History of Coffee

by Dale Pendell

*Coffee, Coffee musse ich haben
und wenn jemand mich will laben
ach so schenkt mir Coffee ein!*

*Coffee, I must have coffee
Anyone who would refresh me
must pour me out some coffee.*

—PICANDER/J.S.BACH,
"COFFEE CANTATA," 1735



Right: *Coffea arabica*, from the *New Oxford Book of Food Plants* (see review, page 89).

Poet and ethnobotanist Dale Pendell teaches workshops for the Omega Institute, the Breitenbush Herb Conference, and the Naropa Institute. His books include *Pharmako/Dynamis* and *Living with Barbarians*. His "Shamanic Plant Suite," a musical invocation with the Oracular Madness Choir, has won critical acclaim.

According to legend, we learned about coffee from goats. Around the year 850 in southern Abyssinia, a young goatherd named Khaldi noticed that his goats were particularly frisky and frolicsome when he brought them home in the evening. Curious, he followed them the next day and observed them eating the leaves and berries of the coffee tree. Possessing the scientific spirit of inquiry, the lad tried the fruits himself and was delighted with the result. The prior of a nearby monastery of dervishes followed his example, and found the beans excellent for sustaining the all-night prayers and devotions of his sect.

Some say the arts of roasting and brewing coffee were revealed to mankind by the Angel Gabriel. Avicenna wrote of the medicinal qualities of coffee around the year 900. The first known cultivation of coffee was by the Arabian colony at Harrar, in the thirteenth century. From Harrar, on the banks of the Red Sea, coffee traveled to the center of the world: Mecca. Quranic authorities generally frowned on coffee drinking, but by the fifteenth century it had spread around much of the Muslim

world. When the first coffeehouse opened in Constantinople in 1475, there were already coffeehouses in Cairo and in Persia.

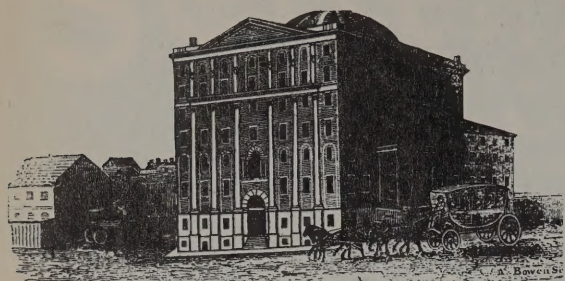
*When the black spirits pour inside
us,
Then the spirit of God and air
And all that is wonderous within
Moves us through the night,
never-ending.*

—RUMI, THIRTEENTH CENTURY

Religious opposition to coffee drinking resulted in political proscription a number of times during the sixteenth century. Central to the debate was whether drinking coffee fell under the same Quranic prohibition against intoxication as wine. Quahweh, coffee, was also a poetical word for wine. Both sides of the debate had their proponents. The "strict" interpretation was that since the Quran did not specifically mention coffee, it was not forbidden. The nonliteralists maintained that wine was a symbol of inebriation, and that any substance that produced inebriation was included in the meaning. Not surprisingly, many of the strict interpreters were coffee drinkers.

*Where coffee is
served, there is grace,
splendour, friendship, and happiness.
You flow through the body as freely as
life's blood, refreshing all that you touch.*
—SHEIKH ANSARI DJERZERI HANBALL
ABD-AL-KADIR, SIXTEENTH CENTURY

Descriptions of coffee drinking began to appear in Europe and England through reports of travelers. Coffee first appeared in Venice in the early seventeenth century; from there, it spread north over the next century. Through all of this time the Arabs kept a complete monopoly on coffee beans. Foreigners were not allowed access to the Red Sea plantations, and no viable seeds were allowed to leave the country. But around 1600 an Indian pilgrim was able to smuggle seven beans back to Mysore by strapping them on his belly, a technique still in use at various bor-



The Exchange Coffee-House, Boston, 1808-1818.

der crossings as other plant products have fallen under customary scrutiny.

In 1690 a group of Dutch mariners managed to steal several live coffee plants and smuggle them out of the Arab port of Mocha. They planted some of the saplings in Java, a Dutch colony already supplying Europe with pepper, nutmeg, and other spices. At least one coffee plant was sent to the botanical garden in Amsterdam. A shoot of this plant was presented as a gift to King Louis XIV of France in 1713.

Ten years later an enterprising French officer, Gabriel-Mathieu de Clieu, the Captain of Infantry in Martinique, broke into the Jardin Royale and stole the plant. In this he was assisted by a lady of the court whom he had broken into in another manner, and who felt kindly towards him. De Clieu immediately set sail with his plant for the West Indies. When the ship landed in Martinique, de Clieu planted his treasure and protected it with guards and thorn bushes. The plant survived, and most of the coffee trees alive in the Western Hemisphere today are its descendants.

Coffee began appearing in Europe in the early seventeenth century. Its entrance, tentative at first, as an expensive and exotic curiosity, quickly became an excited and exponentially growing rush. The first English coffeehouse is credited to "Jacob the Jew," at Oxford in 1650.

In London, a man named Edwards had brought back coffee beans from his travels in the Levant, along with a

Greek slave girl named Pasqua. Mr. Edwards often had his servant serve coffee to himself and his frequent guests. When Pasqua and Mr. Edwards' coachman fell in love and wanted to marry, Edwards, evidently free of morbid possessiveness, gave his consent and was fond enough of the girl to give her his coffee beans and to set her up in business as a wedding gift. Pasqua's coffeehouse opened in 1652 and was a rousing success. Within ten years there were 3,000 coffeehouses in London. In 1660, perhaps not coincidentally, the monarchy was reestablished.

When Charles II tried to close the coffeehouses in 1675, it was due more to quiet opposition to his economic, rather than his religious, policies. The King was forced to rescind his Proclamation when opposition by coffee drinkers threatened to topple the monarchy. Coffee styled itself the "sober beverage." It was an anti-inebriant, believed then (as still today), to be able to sober up those drunk on spirits. By extension then, to one not inebriated, coffee could make the drinker somehow "more sober" than ordinary sobriety.

Before coffee, hot beverages were almost unknown in Europe. Herbal infusions were drunk for medicinal purposes, if at all. Such plant lore resided in the countryside, and herbalism and the women who preserved the tradition were under increasing attack from urban, university-centered, male medical practitioners. Spiced cider and the alcoholic posset were served hot, but the staple beverage everywhere was beer, beginning with breakfast. In most places, one couldn't drink the water. Coffee was the new way: it resonated with images of distant places and foreign cultures; it was the spirit of the Enlightenment and supported the Enlightenment and was supported by it in turn.

The coffeehouse provided an entirely different atmosphere from the tav-

ern or pub. Gentlemanly rules of behavior were posted. Coffeehouses were democratic enclaves, where noblemen got no special seats. They were places to discuss ideas, new ideas to match the novelty of the beverage. The coffeehouse was also the place to discuss political ideas, one of the causes of their episodic suppression everywhere from Constantinople to London. The coffeehouse was also a male preserve, and a place to discuss business.

One of the first London coffeehouses was Lloyds, the beginning of Lloyds of London. Another coffeehouse grew to become the English stock exchange. Others evolved into trading companies, brokerages, and some of England's largest banks. The rest became the English clubs. Coffee was characterized as businesslike rather than frivolous, as reasonable rather than impulsive.

The coffeehouse radically altered English prose style. Writers such as Henry Fielding, Jonathan Swift, Daniel Defoe, and Laurence Sterne, their ears tuned to the speech of the coffeehouses they all frequented, began writing dialog that differed markedly from the stiltedness that had characterized even the popular pre-coffee writers like Thomas Nashe.

They began writing in the rhythms and speech of spoken English: the conversational English of the coffeehouse. It was, after all, respectable. In poetry, coffee went to satire. Pope was a coffee man. There had been a radical element to the coffeehouse, an egalitarianism—often written explicitly in the house rules. No tradesman was expected to stand and give up his chair to a gentleman: all were to sit together, wherever there was an empty chair.

During the eighteenth century women broke the male monopoly on coffee drinking. Parlour coffee drinking, pioneered by the women, aligned itself more with the gentility. Since drinking coffee socially was some-



thing that gentility and the aristocracy did, the middle classes could prove their own respectability and gentility by doing the same. Women's coffee circles, held in private homes, not in public places, became common in England in the early 1700s. There were male jokes about the gossip subjects the women conversed about compared to the serious business and political talk of the coffeehouse. But by bringing coffee into the home, the way was open to its complete domestication, which was well established by the mid-eighteenth century.

At a famous coffeehouse in Paris, the Café Foy, a journalist named Camille Desmoulins who had drunk a great deal of coffee climbed onto a table and delivered a passionate and articulate speech on freedom and the evils of monarchy. A large crowd gathered. The words were repeated and the speech was paraphrased. It was July, 1789. Two days later the Bastille fell.

The nineteenth century witnessed the consolidation of the class interests of the new bourgeoisie—the global emergence of industrial capitalism and colonialism that has perhaps reached its apotheosis in our own time. Coffee tells the story in a succinct way, an en-cup-sulation, as it were. We will consider the case of Guatemala.

"Progress," in practice meaning European-style (mainly Anglo-Saxon) capitalism, was seen as a historical and evolutionary inevitability, and thus became the intellectual rationale for the economic and political exploitation of the indigenous peoples on the frontiers.

To the colonialist nineteenth society, primitive peoples were regarded not as Good Savages but as inferior beings. Partly this is a reflection of the exploitative economic relations: it is psychologically comforting to degrade those one exploits.

In Guatemala, in 1838–1839, when a massive Indian uprising occurred, it was a Liberal regime that was toppled from power. The leader that emerged from the uprising, Rafael Carrera, partly European but mostly Indian, was sup-

ported by the Roman Catholic Church and by the Conservatives.

Carrera represented the Rousseauist current: respect for Indians and their way of life, distrust of rapid importation of European culture and innovations, and always measuring "progress" against its impact on traditional culture. On the other side, the Liberals represented European ideals of democracy industry, and economic expansion. Carrera was overwhelmingly supported by the Indians, who venerated him almost as a god, and his control of the country was near absolute until he died in 1865.

During his administration Carrera instituted astonishingly radical programs of land reform, protecting and even expanding Indian land rights. But more than that, he discouraged imports wherever the product might be produced domestically. By the time he died, Guatemala was self-sufficient in all basic foodstuffs and had a positive balance of trade.


Carrera's hand-picked successor, General Vicente Cerna, unfortunately lacked his predecessor's consummate political skill and never had the full trust of the Indians. The Liberals swept the Conservatives from power in 1871. The Liberals were by then a coffee party. They wanted progress. They wanted to look and live like their European and American cousins and for that they needed capital. Coffee seemed to be the answer to all their dreams. Foreigners were encouraged to buy land to start plantations. Plantation owners were given tax breaks. Coffee was exempted from the export tax.

Coffee plantations, of course, need land. The Liberals rewrote the land laws in a way that made it virtually impossible for the Indians, with their system of communal farming, to retain any legal title to their lands. The government promised to assist plantation owners in removing the Indians from their plantation sites, and delivered on their promise. Labor laws were passed that forced Indians to work for plantation

owners, backed by penalties and punishments. Wages were so low that many Indians lived in continual debt servitude. Unable to farm their own gardens, the Indians and the whole country became import-dependent for food. Wealth flowed into the country, but it remained in the hands of the aristocracy.

Beneath the veneer of democracy, the army was more and more called upon to quell domestic unrest as the plantations pushed deeper and deeper into the interior. Remote villages that had lain relatively undisturbed for centuries, little interacting with the central cash economy, were suddenly disrupted by an overwhelming monetary force that had purchased not only their lands but their persons. The chaotic nature of cash crop economics in the world system is independent of ideology.

For awhile, the signs of prosperity were compelling. The economic consequences of being a peripheral producer for the core countries became more apparent when coffee production in Central and South America, Africa, and the Indies finally caught up with and surpassed the demand. Prices fell, with disastrous consequences for Guatemala and the other peripheral countries that had already spent the expected money. It was a story to be repeated again and again in every part of the Third World. It continues today. It is stamped on the label of every can or bag of coffee.

The history of global coffee production is a laboratory for world system theory: of the interplay of globalized markets with domestic politics, and the reciprocal tensions between social classes, public institutions, and the modern state. 



Adapted with permission from *Pharmako/Dynamis* (2002; Mercury House; see review, page 38).



Café Culture

by Buzz Poole

I go to coffee shops to watch people, not for the coffee. I can make coffee at home. People rustle their papers, peck away at their laptops, and chit-chat, choreographed by the café soundtrack: the obligatory jazz, the grinding of the grinders, the frothing of the milk or appropriate nondairy substitute, the tinkling of glasses, cups, spoons, and saucers.

Twice for this article, all my footwork complete, questions asked, I set out to actually write it in a café. It seemed apropos. Twice I failed. At one café, my attention was consumed by a large painting hanging across from me. The heads and shoulders of Bill Clinton and Vladimir Putin had been painted onto the canvas. They bent towards one another, conspiratorially, diplomatically, Bill's big white head in the foreground, his lips ever so slightly agape as if caught in a whisper conveying matters of grave political importance. Or was he just asking for the sugar?

I can't think of another place where a buck entitles you to stay for as long as you like. If you go to a bar often enough, you'll be dubbed a drunk. Spend enough time lurking about a laundromat or even a library, and people may just find you plain old creepy. Go to a coffeehouse—and be like many others.

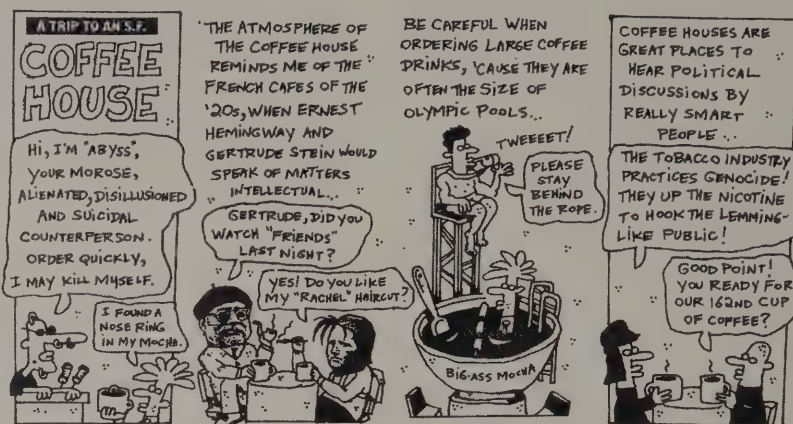
One coffee shop regular in San Francisco's Mission District told me that he was going to let the lease run out on his studio space because it was cheaper and more productive for him to come to the café. "I don't know who got the design down. The funky tables, all these mismatched mugs. The music [Mingus], the old protest posters. It all feeds into this great environment. Everybody always seems busy doing something." Politics and levels of productivity aside, it is this setting that has

seduced café goers from the get-go.

As space and privacy become more and more of a premium, coffeehouses proliferate. As people have clamored for a space apart from their

return, again and again.

Unfortunately, the modern American café chain is an iconoclast, robbing café culture of what was once its greatest attribute—its ability



From *The Coffee Book* (see review page 37).

Don Asmussen 1998

kids, roommates, coworkers, and families, cafés have filled these needs. Ubiquitous to be sure, cafés in America have transcended the beverages, serving as sanctuaries and escapes for people hampered by the confinements of home and office.

Romanticized and commercialized, modern café culture has undergone a conversion. The sheer volume of consumers has simultaneously homogenized it, as well as reigniting enthusiasm for it. Cafés, once home to marginalized members of society, now stand proudly in the mainstream, encouraging customers to stay for as long as they like and to continue to

to create an arena for diversity.

The king of the café chains is Starbucks. With enough fake exposed wood to hint at tradition; lots of glass; stools, sofas, tables, and chairs; and some notion of funkiness; you have any one of the more than 4,200 Starbucks flecked all over North America (with another 1,100 in twenty-five other countries). Some people adore it. Starbucks has created a singular café experience, the same in New York as in Des Moines. What was once a pastime for idle vagabonds has become a pursuit as American as baseball and apple pie. **WG**

Buzz Poole is a Bay Area freelance writer posing as a graduate student at San Francisco State University. He can be reached at liquidsecret@yahoo.com.

Espresso: Made by heating water to just below boiling, then forcing it through a crucible of densely packed, finely ground coffee.

Caffè Latte: A shot of espresso topped with a generous amount of steamed milk, with foam.

Caffè Mocha: A shot of espresso mixed with cocoa powder and sugar, and topped with steamed milk.

Caffè Misto: A mix of 1/2 drip-brewed coffee and 1/2 steamed milk. Also known as Café Au Lait or Café Con Leche.

Ristretto: "Short pull" espresso made with less than the usual hot water for a highly intense shot that highlights espresso's caramelly sweetness.

Cappuccino: Traditionally made with milk foam and espresso, but little or no steamed milk.



Cupping:

Don't Try This at Home, Kids

by David Bolling

"A coffee tasting?" I said to Stephanie as she was rounding up the staff. "Sure, I can do that. Sniff a little, sip a little, Make some pithy comments. Should be simple."

My assumptions were quickly shattered.

First, I have to explain that I drink maybe three cups of coffee a week. I love the rich, dark flavor but my body doesn't like the caffeine, and decaffeinated coffee has always seemed like a contradiction in terms.

Second, I'm not familiar with the protocol or the language of coffee. Until recently I didn't know a cappuccino from a capuchin. I knew Juan Valdez but I didn't know how to make a latte.

Third, it's not even called a coffee "tasting," it's called a "cupping." And to be really good at cupping requires "tongue training," which sounds more than vaguely sexual.

I had a lot to learn.

For one thing, when you "cup" coffee you don't sip, you slurp. The louder and more vulgar the sound, the better. There are professional cuppers renowned for the noise they make. The point is to aspirate the coffee with such force that it's atomized into tiny droplets that fully disperse over the tasting regions that define the geography of your tongue. There are, in fact, tongue maps that were once popular with coffee cuppers showing exactly where the tongue perceives sweet, sour, salt, and bitter tastes. Those maps are now in disrepute and scientists believe the four sensations can be perceived all over the tongue.

But professional cuppers will tell you that flavor perception and tasting regions vary from tongue to tongue

and that to be a really good cupper, the kind who can tell a Colombian bean from a Guatemalan, you've got to train your tongue to taste.

To do that you take a little paintbrush and dab the four flavors on your tongue, keeping track of where the taste sensations are strongest. After considerable experimentation, the serious cupper has a refined tongue map and is ready to perceive and describe coffee flavors with a degree of accuracy and subtlety impossible for simple slurping slobs like the *Whole Earth* crew.

But professional cuppers don't do this for fun. They do it because one bad bean can spoil the brew, and because gourmet blends require expertly chosen combinations of beans. Some coffee cuppers do this all day long and they earn a lot of money. We took about an hour and no one offered to pay us.

So, with our tongues completely unmapped, we stumbled into the cupping room of a local organic roaster, Taylor Maid. We were led by Stephanie, who grew coffee in Kona and thus lays claim to more coffee knowledge than the rest of us combined. What we encountered was a rotating round table lined with little trays of green beans, small glasses, and some empty tin cans for spitting. The beans, which weren't marked, were from Mexico, Nicaragua, and Ethiopia. Our job: pick the best ones and identify their origin.

For cupping, beans are given a light roast to enhance subtle flavors, but it tastes much weaker overall than anything you'd drink. Once that was done, we sniffed the beans to gauge aroma, and some of us ate a few. Then the beans were ground, sniffed again, and mixed with hot



WWW.COFFEERESEARCH.ORG

water. Finally, the slurping started.

Another surprise. You don't put the cup to your mouth; you dip a spoon and slurp from that. The sounds ranged from mildly amusing to mildly disgusting. Emily Post would be shocked. Our own Emily's slurp was rather demure, while Thalia seemed to have a thousand-watt Hoover hidden behind her lips. There's a fine difference, I discovered, between slurping the coffee onto your tongue and inhaling it into your lungs.

When all the slurping and spitting was over, and after the inevitable jokes about who got to drink from the cans, we compared notes and discovered, to our surprise, a remarkable consensus: most of us liked the same two of the seven beans best—one from Mexico and one from Nicaragua. We also agreed that a highly touted Ethiopian bean, tasted separately, was just flat delicious. But none of us had a clue beforehand where the beans were from.

The lesson from all this? Don't try a cupping at home; it's too much work. And don't stand too close to Thalia when she's slurping; you could lose your shirt. **we**

A cupper smells the coffee before slurping.

The Economy of Coffee

Supply glut, crashing prices, desperate farmers: what's the solution?

by Donald N. Schoenholt

Adapted with permission from *Tea & Coffee Trade Journal*, October 2001 and December 2001/January 2002.

The coffee crisis, which has seen prices of green coffee plummet 40 percent in a one-year period, to below \$.50/lb., is scary, and it is real. It threatens to have devastating effects on coffee farmers, the environment, and whole countries dependent on the coffee trade. (See "Coffee, Certification, and Consumers," page 25.)

Several voices have blamed Vietnam's rise as a major producer of cheap robusta coffee as contributing to the world robusta glut and subsequent low green coffee prices for all species, and most varieties and origins. Vietnam's entry into the export coffee market with such sustained ferocity has put pressure on world

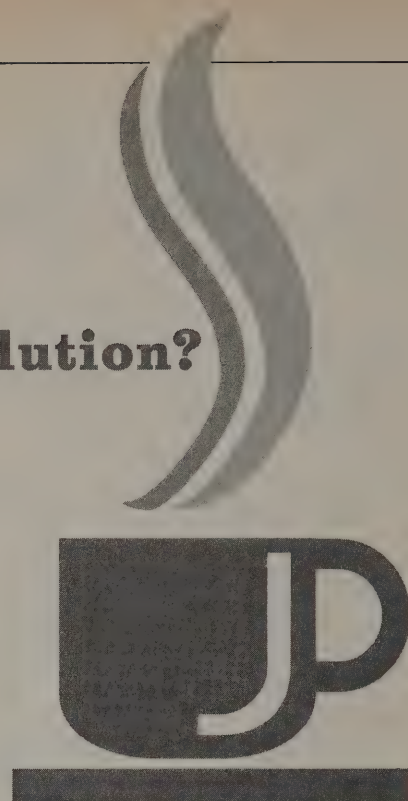
coffee prices. But Vietnam has as much a right as any other nation to grow and offer coffee to world markets.

The World Bank has actively promoted the development of Vietnam's coffee exports, as has the Asian Development Bank. These world agencies that encouraged and backed Vietnam's development have themselves played into the hands of a monumental oversupply disaster.

There is more. The United Nations has sponsored programs in Bolivia and Colombia encouraging farmers to switch from cocoa to coffee farming. The International Coffee Organization provided funds to Angola for the revival of its coffee production after a long civil war decimated production.

Not surprisingly, the World Bank looks upon Vietnam's coffee victory with pride. "Vietnam has become a successful producer," the *San Francisco Chronicle* quoted Don Mitchell, principal economist at the World Bank. "In general we consider it to be a huge success." He added that nations (such as Guatemala, with a three-dollar-per-day minimum wage) that cannot compete with Vietnam's one-dollar-per-day labor costs or Brazil's mechanized plantations need to shift to farming other crops.

The world price for robusta coffees has sunk under the weight of oversupply, and has dragged the better arabica grades down with it.

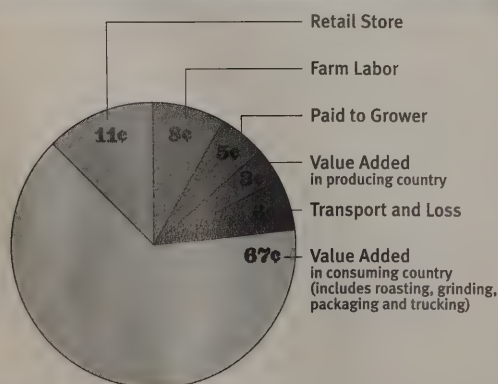


We see specialty green coffee prices fighting the downtrend, but they are not worth what they were eighteen months ago. There are notable specialty coffee retail success stories, but these are, in global terms, on a very small scale. Specialty coffee continues to be a high-profile business populated by small independent operators. While closely held companies do not report earnings publicly, few publicly traded companies are showing profits at all.

If specialty coffee cannot keep money in the pockets of the farmer, our failure will result in a growing scarcity of the best grades. It is feared that, as a practical matter, some varieties of arabica coffees could actually cease to exist in world commerce.

The current coffee crisis will run its course, just as those of the past did. Producers will sustain real pain, and some farmers will stop farming. Coffee farm workers and their families, perhaps in large numbers, will be displaced. Consumption will continue to grow in new markets in Eastern Europe and Asia. The out-of-home market will continue to grow in North America, and Western Europe, even in some producer

Where a Dollar Spent on roasted, ground coffee in the US supermarket goes



DATA FROM THE COFFEE BOOK (SEE REVIEW PAGE 37).



nations such as Brazil.

The market dynamic will reverse as supply of stocks and demand equalizes. The rebound will be hurtful to the consumer, and may be severe enough to curtail consumption due to high prices. In time again there will be oversupply because high prices will bring a new wave of planting in an effort to cash in on the high price levels, which will in turn begin the round again. The economic cycles of coffee are as old as the coffee trade.

The question remains whether this generation of coffee leaders, who have accomplished so much for the consumer in the way of product and price point choices, can do as much for their farmer partners. Whether we can find the answers to prevent the repetition of this unhealthy business environment once and for all is a healthy challenge. There are some hopeful signs on the horizon:

Internet auctions such as those held during the last year in Brazil, Panama, and Guatemala have illustrated that such venues can bring substantial prices to those farmers who produce, enter, and win regional and national cupping and grading competitions. The East African Fine Coffee Association, funded by the World Bank and the US government, is promoting open auctions that they hope will support the better grade East Africa coffee values.

The Specialty Coffee Association of America has begun working on a *certification system* which would both guarantee origin and cup quality through a rating system akin to that used by *Wine Spectator Magazine*.

Partnering between individual farms, farmer cooperatives, and specialty roasters is also a desirable effort to support small independent farmers

and cooperatives. Green Mountain Coffee, Waterbury, Vermont, is a leader in efforts to partner with and support their farmer sources at origin. In hard times for public companies, Green Mountain sales are up, and its stock price has soared during the last year. Those who aspire to a better future for all in the coffee world might use their efforts as a model.

Long-Term Solutions

In the US, coffee people and consumers with their hearts in the right place can proactively reach out to the government and the public in support of buying practices that are more just to farmers and better for the environment.

If an organized group wants to reach out to Americans and have them bring their ideals home there are many large coffee users to approach who are sensitive to grassroots voter pressure. The US armed forces remains a tremendous buyer of roast coffee. Other branches of the government also buy coffee. There are high-profile buyers too, including the coffee served at the Executive Mansion and in the dining facilities of Congress.

Each state operates hospitals, penitentiaries, and other places where coffee is served throughout its jurisdiction. Amtrak, subsidized by the federal government for a generation, buys and serves coffee by the bushel. In addition there are large businesses preparing coffee for supermarkets and fast food outlets that would be sensitive to public interest in being more environmentally and socially sensitive in their choice of raw material sources.

As painful as coffee boom and bust cycles are, efforts throughout the last 100 years to artificially control

Leading Coffee Exporters		Leading Coffee Consumers	
Country	Millions of Bags	Country	Kg/person
Brazil	32.2	Finland	11.68
Colombia	12.0	Sweden	11.08
Vietnam	11.3	Denmark	10.20
Indonesia	7.3	Holland	9.89
Mexico	6.3	Norway	9.19
India	4.9	Germany	8.27
Guatemala	4.5	Austria	8.01
Côte d'Ivoire	4.1	Switzerland	7.83
Ethiopia	3.7	Belgium	7.04
Uganda	3.2	France	5.78
Peru	2.5	Italy	4.41
Costa Rica	2.4	US	4.40

2000 FIGURES:
COFFEE RESEARCH INSTITUTE

1988 FIGURES:
COFFEE RESEARCH INSTITUTE

Coffee Glossary

Arabica The "original" coffee, native to Ethiopia. Grows at altitudes between 1,500 and 6,000 feet. Accounts for about three-quarters of the world coffee trade. In broad terms, arabica is grown in Central and South American countries.

Bag A jute or sisal bag typically containing 60 kg (132 lbs.) of coffee beans (weight differs in some places). The bag is the usual measure for buying and selling coffee.

Cherry The coffee tree's bright red fruit. Cherries normally each contain two beans.

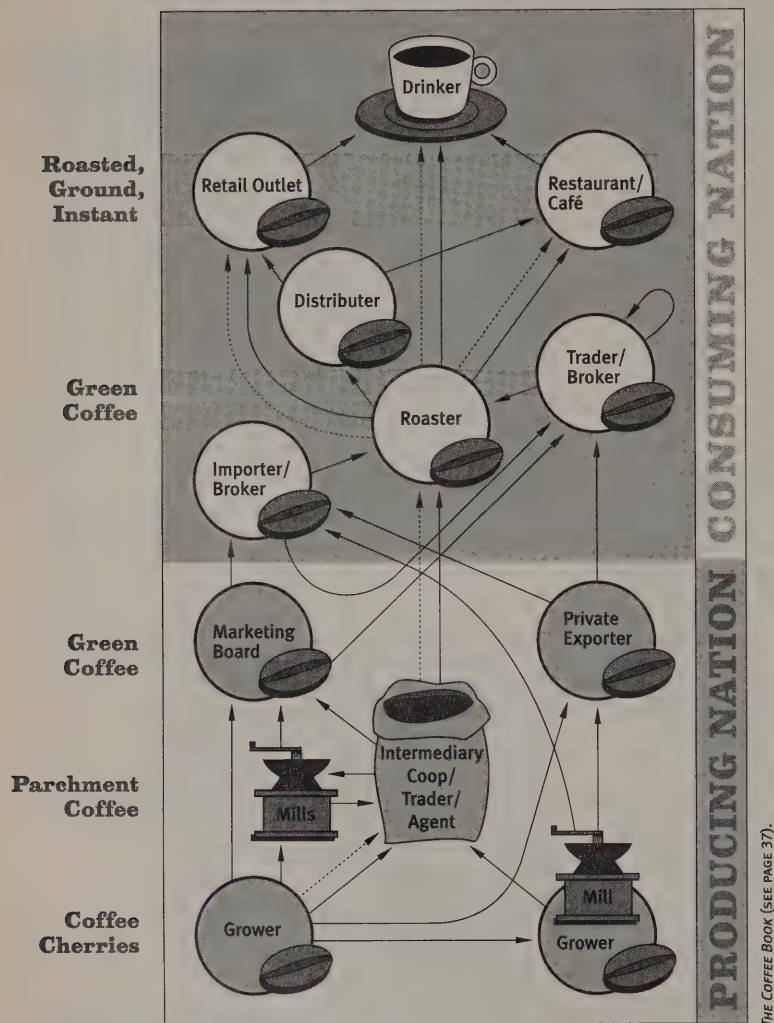
Green Coffee Beans after the husk (see "parchment coffee") has been removed by milling. The form in which coffee is normally shipped to importing countries.

Parchment Coffee Dried, fermented beans encased in a husk, the inner layer of which is called the "parchment."

Robusta Cultivation began in the mid-nineteenth century in West Africa. Grows between sea level and 3,200 feet. Beans are smaller than arabica, with inferior flavor and more caffeine. Easier to grow, with more tolerance to disease and variable growing conditions. Commands a lower price than arabica, is used in mass-produced ground coffees. In general, grown in West Africa and Southeast Asia (as well as Brazil).

Specialty (or "Gourmet") Coffee "The preparation and sale of whole beans blended, ground, and bagged right in front of the customer. It is an effort to bring the coffee business back to its roots." —DONALD SCHOENHOET, QUOTED IN *UNCOMMON GROUNDS* (SEE REVIEW, PAGE 37).

THE COFFEE DISTRIBUTION SYSTEM



Coffee can travel a multitude of pathways from grower to drinker. Fair Trade relationships (dotted) eliminate many redundant linkages.

supply to stabilize prices have resulted in long-term disappointment. Well-meaning international agreements including trade quota provisions and guaranteed minimum price floors likewise have failed to prevent wild price fluctuations. The current steep decline in world coffee values can be said to have been caused by a failure of international political and economic understanding. Still, prices would not have failed if the market fundamentals were there to keep them strong.

As imperfect as it may be, there is a mechanism in place with which we can do something right now with an immediate effect. Independent roasters can buy Fair Trade and other value-added coffees (see page 25) to illustrate our solidarity with the independent farmers. If each of us in the business bought just five bags more of these coffees next month than we would have normally purchased of these sustainable coffee assets, we would increase consumption of these coffees by about twenty-five containers (6,000 bags) instantly.

Fair Trade agreements are not the perfect answer to today's coffee crisis, but Fair Trade and the other value-added products such as the Smithsonian Institute's Bird Friendly program and organic coffee availability are in place. They have been proven to work for the farmer, and the crisis is happening right now. This is not charity. These are mechanisms of support that guarantee the farmer a better deal in the marketplace.

This is a golden opportunity for the largest coffee companies to step up and be counted. Kraft, Folgers, Sara Lee, and the other large roasters have the unique opportunity to take the high ground with the consumer, and their sources at origin, and declare that they support the concept behind the fair-trading idea if not Fair Trade itself. They can in one bold stroke change the economic coffee landscape with an initiative in support of the coffee farmers in the global village. This is a perfect opportunity for the biggest money players with the most economic, human, market, and political resources to work with the smaller specialty coffee community in a joint effort with farmers' organizations to support sustainability at origin. **WE**

Donald Schoenholt is CEO and master of coffee at Gillies Coffee Company in Brooklyn. He is a roaster of sustainable coffee, specialties editor of *Tea & Coffee Trade Journal*, a founding supporter of Coffee Kids, a member of the Smithsonian Migratory Bird Center's Bird Friendly coffee program, and the first corporate supporter of Grounds for Hope.

STARBUCKS: To Drink or Not to Drink?



So what is it about Starbucks? Megathreat to community diversity, or groundbreaker for specialty coffees? Symbol for everything wrong about globalization, or company with a conscience? King of greenwash, or pioneer in wedding commercial success and good works?

It's clear that the chain—with more than 5,200 outlets in over twenty-five countries, has captured someone's attention. It was a target of vandalism at the 1999 Seattle WTO demonstrations, and has been the subject of campaigns by Global Exchange and the Organic Consumers Association. Deaf Dog Café in Sonoma County devised "Friends Don't Let Friends Go to Starbucks" stickers that can be seen on car bumpers all over the coast.

Starbucks is irrefutably the largest specialty coffee company in the world, with reported revenues of 2.6 billion dollars in 2001. In the whole world of coffee, though, Starbucks represents only one percent of the coffee supply, and all coffee shop purchases together account for about 5 percent. By contrast, Phillip Morris (owner of Kraft Foods) and Sara Lee together account for 25 percent of the world market.

In *Uncommon Grounds* (see review, page 37) Mark Pendergrast quotes Howard Schultz, the mastermind behind the Starbucks empire: "Starbucks is going to be a global brand, in the same genre as Coke and Disney." They play hardball, Pendergrast reports, moving in across the street from small independent cafés, and in some cases buying out the

buildings where competitors operate.

But Starbucks claims social responsibility has been a part of its corporate structure since it was founded more than fifteen years ago.

Last year Starbucks pledged to purchase one million pounds of Fair Trade coffee over an eighteen-month period. It partnered with Conservation International to buy shade grown coffee in Chiapas, Mexico and has contributed to CI's Conservation Coffee Program. It's created purchasing guidelines for labor and environmental standards. It supports national literacy programs and community projects in places where it owns stores. It claims that it does not use any genetically modified materials in its coffees and teas, and that it practices extensive recycling. The company has been widely credited with exemplary employee practices, including higher-than-average pay, and benefits—including stock options—for even part-timers.

What makes Starbucks a target of organizers? In part, people are reacting to those Coke and Disney aspirations, the threat that Starbucks is propagating café monoculture throughout a globalized world. In part, it may be the company's desire to be seen as a corporate good citizen. Writing in the *Financial Times*, Alison Maitland quotes Ronnie Cummings, director of the US Organic Consumers Association: "We target them because they're the only big coffee company that pretends to be socially responsible. It's better to start with them. Kraft is never going to do anything. When you're the grassroots with limited resources, you have to pick your targets carefully."

The primary charge leveled at Starbucks is that its do-good actions are just greenwashing, enough to give an appearance of environmental and

social concern, but far less than the company is capable of. In response to the company's pledge to buy a million pounds of Fair Trade coffee, Global Exchange said it was pleased with any increase in Fair Trade purchasing, but argued that a million pounds only represents one percent of Starbucks's business, while almost all of the other hundred companies offering Fair Trade certified coffee meet a minimum standard of five percent. (On the other hand, industry giant Folgers simply said "No" when Global Exchange challenged them to begin offering consumers any Fair Trade options).

Starbucks draws mixed reviews from its fellows in the specialized coffee industry. Paul Katzeff, CEO of Thanksgiving Coffee (a sixth of whose purchases are Fair Trade), agrees with the charge of greenwashing, calling Starbucks's practice "offensive." But is Starbucks an evil empire? "Absolutely not. If all US businesses were modelled after Starbucks, the world would be a better place. They treat their workers exceptionally well."

Mark Inman, co-owner of Taylor Maid Coffee, credits Starbucks with introducing specialty coffee to a new audience, one that he hopes will migrate to companies such as his as it appreciates better coffee. He has worked with Starbucks on questions such as organic and Fair Trade, and believes that the company's concern to do better by farmers is sincere.

As for fears Starbucks will destroy café culture, Katzeff isn't worried. Starbucks, he says, offers "a guaranteed mediocre cup of coffee. They buy good coffee, but they don't brew good coffee." He adds, "When you go into a neighborhood coffee shop, you go in to buy a bit of the creator's spirit. Starbucks is all the same, you don't feel it. It's not a community center. It's a good place for a quick fix."

—SGS, EP, MKS

Children: The Other Side of the "Coffee Tour"

by Emily Polk



Young coffee pickers in Guatemala.

Two years ago, while backpacking through Central America, I stopped in Guatemala for a few months to study Spanish. People from all over the world study in this colorful, mountainous country, long renowned for its inexpensive schools.

Our school, a progressive institution run by two brothers who also taught Spanish to Peace Corps volunteers, sponsored many field trips, including a "coffee tour." About a dozen fellow students and I bor-

rowed some old bikes from a local bike store and rode with our teacher to a large coffee estate just outside of town.

The tour took less than an hour. We saw women sitting silently at long tables, separating good beans from the bad. We saw beans roasted and blended and packaged in a pretty and efficient process. We sampled the coffee and marveled at the taste.

At the end of the tour, after we bid farewell to our guide, our teacher

gathered us together. "Your tour is not over," he whispered to us. "I am going to take you out a different way." Our usually jolly teacher looked solemn as he ordered us, "Get on your bikes and stay in a straight line. We will leave the way we came in and take a different turn before the road. Do not get off your bikes until we leave the grounds."

The only thing on my mind as I followed the others in a thin train was not falling off my rickety bike. We veered around and headed down a dirt path right into the heart of coffee fields that stretched as far as the eye could see. Then I looked up.

The first thing I saw was the dirt on the sunburned skin of dozens of children picking coffee. They all looked between the ages of three and sixteen. Brown earth smudged in the wrinkles of their foreheads, around their eyes, and under their fingernails. Dirty beads of sweat sprouted like greasy pearls on the tops of their lips. They lined the long rows, picking from coffee bushes in a steady rhythm that betrayed the years they'd spent working there. Barefoot toddlers with swollen bellies waddled between the bushes. Not even a soft breeze offered relief from the heavy heat.

The children and older workers stopped picking as we made our way slowly down the lanes. My skin and eyes were the same color as theirs, but they stared at me as though I was an alien descended from the skies. They could not understand my language, nor I theirs. Many were Indians who came down from the Highlands for the harvest. Others had been there for years. Many of the children had never left the plantation.

Later, back at the school, we learned what the coffee-tour guide had not

All photos courtesy of Smithsonian Migratory Bird Center (see page 27).



taught us: Guatemala is one of the poorest countries in Central America. High unemployment and illiteracy make it easy to recruit low-wage laborers to work in the coffee fields.

There are around 60,000 coffee plantations in Guatemala, which provide work for over one million people. Although there are child labor laws, they are rarely observed by plantation owners or enforced by authorities.

These children work an average of twelve hours a day, six days a week. They do not get paid individually for their work. They are helping their families to meet quotas. During the harvest the quota is the number of coffee bins that need to be filled. At other times it is a certain number of trees to be pruned or areas to weed. Families earn between \$1.50 and

\$2.50 a day. By Guatemalan living standards, this is barely enough to buy food and clothing.

Just before we left the fields, our teacher pointed to wooden barracks on the outskirts. That is where the families live, he told us. My heart began to pound and I stumbled off my bike. One family to a room, with no access to electricity, running water, or any kind of medical facilities. The workers were uneducated. Most were illiterate and malnourished.

Our teacher told us the stories of workers who tried to organize a union on the estate, which had been owned for years by a Spanish family. The workers were dismissed immediately and blacklisted from working on other farms. Since they did not have money to afford a legal battle, many of them had to find income elsewhere.

"There are always other sides to a story," he told us as soon as it was safe to stop. "These children have nothing and nobody to speak for them. If I speak out, I will not be allowed to bring my students here. Please go back to your countries and speak for them."

I stood in the glaring Guatemala sunlight, sweat soaking my back as I

listened to my teacher. The smell of coffee beans hung in the air. My breath, my clothes, everything smelled like coffee.

I knew then, as I do now, that it is an impossible smell to wash off. **we**

Left: A boy sprays coffee bushes with agrochemicals to increase production.



Children can pick coffee beans up to twelve hours a day, six days a week, on many farms throughout Latin America.

ACCESS TO CAMPAIGNS, PROJECTS, AND ORGANIZATIONS WORKING TO END CHILD LABOR

COFFEE KIDS

Plaza Esperanza
1305 Luisa Street, Suite C
Santa Fe, NM 87505
800/334-9099
www.coffeekids.com

An international nonprofit working with local organizations to improve the lives of families in coffee-growing communities. Programs range from economic development to health care to providing scholarships for schooling. The website has

links to project profiles, coffee facts, and community solutions.

THE UN WORKS PROGRAMME

Department of
Public Information
Room S-955
New York, NY 10017
www.un.org/works/index.html

Click on links to "labour" or "children" for more on programs to end child labor around the world.

THE INTERNATIONAL LABOR ORGANIZATION
International Labour Office
4, route des Morillons
CH-1211 Geneva 22
Switzerland
+41 22 799-6111
www.ilo.org

They are currently sponsoring IPEC (International Program on the Elimination of Child Labour) to help phase out child labor on Central American plantations. The program includes

social rehabilitation and protection to help the region's 800,000 children working in agriculture.

US/LEAP

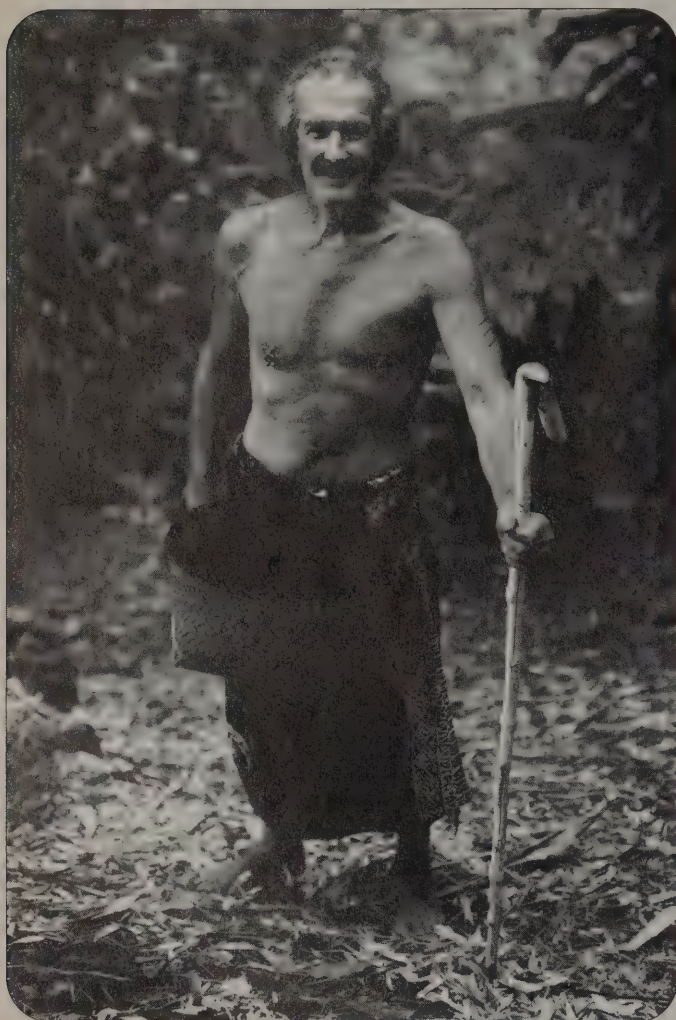
U.S. Labor Education in the Americas Project
PO Box 268-290
Chicago, IL 60626
773/262-6502
www.usleap.org

A nonprofit organization that runs a variety of cam-

paigns to support rights for workers in Central and South America. Their efforts largely support workers employed directly or indirectly by US companies. Click on the coffee link to find out how they are urging corporations to ensure that coffee growers who supply them are paying their workers a decent wage with decent working hours.

Kona: Handmade Volcanic Coffee

by Stephanie Guyer-Stevens



ALL PHOTOS COURTESY JOHN C. RUSSELL

Terry Fitzgerald
ready to pick
Kona coffee.

Kona is really a dot on the side of a volcano in the most remote archipelago in the world. For nine years we made that spot our home. Coffee and farming coffee sustained us. My children were both born on a coffee farm in Honaunau, Hawai'i, the heart of coffee country, in the same houses where many children had been born the generation before them, when optimistic young homesteaders resettled the old Japanese-Hawaiian coffee farms in the 1970s.

It's hard to recognize Kona as the place it was when I moved there in 1992. By the time we left for California last year, we felt old Kona was really gone. But there is something unchangeable and tenacious about Kona. As a place, it has a driving spirit, an absolute will to survive. I first realized this in the ferocity of plant life there. Plants grow with an unnerving speed and strength.

Coffee is a strange and willful crop, and more so in Kona than in the rest of the world. Elsewhere the trees are routinely cut down to get rid of pests. Kona coffee trees don't have too many pests, so they persist and persist. On abandoned farms the jungle grows over them and still coffee trees persist—growing tall and thin to reach the light.

Coffee came to Kona in 1828 around the same time as the first American missionaries. The children of the missionaries were raised with the opportunities of a new frontier, and from them a class of opportunists and venture capitalists was born. Their legacy was most striking in the creation of the plantation economies of pineapple and sugar. Coffee was also tried out throughout the islands, but it turned out to be mostly unsuitable for growing anywhere but on the Kona coast of the Big Island. In Kona, probably because of the steep terrain, lack of roads, and lack of groundwater, coffee

had not yet been developed as a plantation crop. The few coffee plantations that were tried in Kona in the 1870s through the 1890s dissolved into sharecropping, with the farmers eventually leasing the five-to-ten-acre plots of land they farmed.

Kona coffee was really built into an industry by the Japanese immigrants during the late nineteenth and early twentieth centuries. They were first brought to the Big Island as contract laborers to the sugar plantations on the northern Kohala coast and the eastern Hamakua coast. Life on the sugar plantations was hard, and those who could escaped, by walking from the other side of the island to farm the slopes of Mauna Loa, in Kona. When the Japanese arrived in Kona they brought with them a work ethic, a pioneering spirit, a hard-won ability to survive, and an incredible thrift of natural resources.

When the Japanese began planting coffee they moved into old abandoned Hawaiian farmland, which had already been cultivated for over a thousand years. This was the most extensive agricultural system in the world, called the "Kona-field system" by archeologists. The Japanese used the beautifully designed culverts, rock walls, and interlocking fields designed for growing dry-land taro to cultivate coffee. Because the new agriculture was built on top of the old, much of the Kona field system was not bulldozed and is still intact. Many groups of people moved into small coffee farms along with the Japanese, particularly the Filipinos.

Kona has ideal growing conditions for coffee. Most parts of the Hawaiian islands have rain in the winter. Kona sits on the leeward slopes of Mauna Loa, which makes a



complete reversal of weather patterns. It rains during the hotter summer months, and is sunny and dry during the cooler wintertime. This works beautifully for coffee. In the summer heat, with cloudy and rainy afternoons, Kona is like a greenhouse—warm, wet and steamy—perfect for setting the fruit. In the drier winter, the sun ripens the coffee cherry. The intermittent rains during the dry season cause bursts of flowering, with all the coffee trees covered with white fragrant blossoms at once. The morning of a day when the coffee had blossomed, we knew without opening our eyes—we were awash in intense jasmine-like fragrance from the volume of flowers bursting into bloom simultaneously, and assaulted by the hum of thousands of bees in pursuit of the nectar, going for their moment of coffee-honey glory.

In this microclimate, the Kona coffee industry grew, closely tied to the mainland coffee enterprises. Initially the coffee farmers developed cooperatives, which pooled their coffee to be bought and shipped by the large manufacturers to the mainland. These neighborhood coffee cooperatives were in use up through World War II. After that, Kona coffee went into decline, as the larger companies developed cheaper suppliers in Latin America and Africa. Kona couldn't compete. The farms were small. The farmers worked for themselves, and supported extended families on their incomes—in a now-American economy, paying American prices. Many farms stayed in business by adding other crops, like macadamia nuts, to their land. Some floundered, as farmers turned to other sources of revenue. Some were abandoned altogether. In the late sixties and early seventies, a resurgence happened as young homesteaders from the US found

their way to Kona. Many budding farmers moved onto abandoned coffee land to try their hand at coffee, and supported their lifestyles by growing that most valuable of all crops, *pakalolo*, marijuana. This transformed the Kona landscape by introducing a real top-dollar crop to support a resurgence of interest in growing coffee. The new young homesteaders had a real interest in revitalizing agriculture. Along with growing their marijuana naturally, many were growing their coffee organically as well. There were plenty of failures, but many successes, due in part to the lack of coffee pests. This was the reinvention of home-powered, homegrown coffee, mostly produced for large mills on the island, or shipped off-island to mills in Honolulu.

It is easier to say that Kona coffee has sustained itself as a crop than to say that this is a sustainable crop. It's almost as if at every point where coffee has seemed doomed as a crop for Kona, some turn of fate has come through to revitalize it, change its position, or turn around the market.

Nevertheless, the ingredients of sustainable agriculture are all a part of Kona coffee farming—sustainable growing techniques, small acreages, independent owners, decentralized production and markets, and completely local production and harvesting.

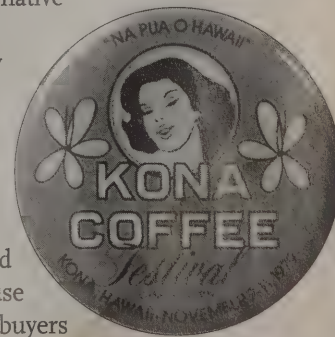
By the mid-seventies, Kona was beginning to gain brand recognition, but there still wasn't much of a local market—most Kona residents still drank Folgers from a can, if they didn't produce their own. The old on-the-farm Japanese production techniques began to be revitalized, and homesteaders hooked up lawn mower engines to old hand pulpers to mill their coffee cherry. Some of the larger farms began to invest in the large machinery to mill and roast

their own and their neighbors' coffee. By the early eighties, tourism began to change the Kona landscape. New highways were built, and coffee country became a tourist destination. The state of Hawai'i began a serious crackdown on the marijuana industry, which sent many of the home-steading coffee farmers to jail. Without marijuana subsidizing it, coffee needed tourism to become the new market. Small farmers began to develop their own labels, and began to market more aggressively to supermarkets and local outlets where tourists could buy their wares. It still remained a struggle to pay for the cost of farming the land. Organic farmers did have the leverage of being able to label their coffee organic, and could command a higher price, which helped towards covering some of their additional labor costs.

But the coffee farmers who emerged to put Kona coffee on the map of high-end products, geared to the gourmet market, were the new coffee farmers, a resurgence of back-to-the-landers, recently moved from professional lives on the mainland, with plenty of money to put behind their farms.

As more and more people join the coffee farming boom, the bulldozers are flattening out land on either end of coffee country—north in Holualoa, where the wealthier agriculture zoned developments are being built, and south towards Honomalino, where coffee farms are being carved out of native ohia forests.

The money they brought to Kona spurred exponential development, especially in the past decade. This has both moved land out of agricultural use and provided more buyers



for Kona coffee. This gentrification developed a population of gentleman farmers who are interested in creating a niche market of a specialty crop. They have had the benefit of being able to glean knowledge from many years of experience of their farmer neighbors to help them in this process.

The 1990s brought the Internet on the Kona scene, and coffee farmers turned to the World Wide Web as a means to control the marketing, and selling of the roasted beans directly to the consumer. This has been very successful for many coffee farmers.

The Kona coffee industry is now benefiting from the small farmers who have access to their own technology most of all. Farmers control the process of growing, processing, and roasting their own coffee, and offer expertise each stage of the way. A very intimate business is emerging from this meticulous attention to detail, and the environment that is allowing it. Many people equate it with the gentleman farmers in the wine industry, but it requires even more careful attention, and more hand production than wine. It's being refined, smoothed, developed, formed by the careful attention of many farmers. There is nothing more that a crop could ask for to guarantee its perpetuity.

Growing coffee is now often a second or even third job for many farmers. So is this sustainable agriculture? It depends on what the point of growing a crop is. If the purpose of sustainable agriculture is to support the health of the land, and engage many people within a community in actively working on the land to produce a saleable crop with a good market value, then Kona coffee meets the criteria.

HOW TO MAKE COFFEE



Tai Liko Scarborough picking coffee.

The coffee "tree" is a bush from the gardenia family. The beans are its seeds, enveloped in the soft red pods of little red fruits. Inside these fruits a membrane called "parchment" protects the green beans, usually two per fruit. (At the tips of the coffee branches a fruit will grow with a single bean.)

Coffee farmers in Kona call the red fruit "cherry," because it looks like a cherry when it's ripe. When you pick a red coffee bean off the tree and eat this outside fruit, it's sweet, and the inside membrane is hard and slippery from

the mucilaginous coating. The red cherry is the perfect indicator as to whether the coffee is ready to be picked. After a day's worth of picking, which could yield between 100 and 200 pounds per picker, the coffee cherry goes the same night to the coffee pulper.

Most coffee farmers in Kona don't have all the machinery required to process their own coffee but many do have some type of a coffee pulper, called a cherry mill. There are a few old hand mills still in use, but many have been attached to a lawn mower engine or washing machine motor. Some are larger, and are attached to an old car engine. However constructed, they perform the same function—they get the red skins off the bean. The bean comes out one end of the mill, and the coffee cherry out the other. Farmers who don't have their own cherry mills will sell the red cherry to a buyer, someone who owns a larger-scale production set-up, and who will resell other farmer's beans under his or her own label.

The beans, with their gluey goo coating still on the parchment, are left to soak in a bucket of water



Pouring coffee into the pulper.



overnight, generally for no longer than sixteen hours. This allows the coffee to ferment a little, but not too much. How long to soak is a fiercely debated question. The flavor of the eventually roasted bean will be affected by the decision the farmer makes.

The farmer then rinses and scrubs the slime off the beans (no small task).

The beans, still slippery in their parchment coats, are then set out to dry. The coffee drying system in Kona is relatively straightforward. Coffee farms are small, ranging in size from one to forty acres, so there is usually plenty of room for the beans to sun-dry, either on wooden platforms completely exposed to the sun, with roofs that can be rolled over the beans when rain threatens, or else under a clear plastic greenhouse roof, open on either side, high enough overhead to be able to stand up under them. Because someone has to be home on the farm at all times during coffee season to roll the roof out if it does rain, many farmers now opt for the greenhouse style, although the plastic slows the drying process.

The beans are laid out a couple of inches thick, and the coffee is raked to even out the drying of the individual beans. The rake is like a giant Japanese sand rake, with large wooden pegs spaced a couple of inches apart for teeth. The first day the parchment gets raked every fifteen minutes. The next day the raking is hourly, and by the third day it's down to three or four times a day.

Knowing if the parchment is dry is usually a bite test—like biting pearls—that determines the dryness of the bean—you're looking for about 10-percent water content. After biting hundreds of beans, teeth can develop amazing accuracy.

After the beans are dried, they can be stored with the parchment on

them for a long time without much aging, as long as they're sealed against Kona's sultry humid weather. But they're usually hauled off straightaway to a parchment mill. This is often a coffee bean's first introduction to the outside world, and because of that, farmers tend to take the milling most seriously. They have taken tremendous pains, probably over the course of months, to make sure the coffee is being processed to their own unique and exacting standards. Their great concern now is—"are my beans getting mixed with other beans? Are nonorganic beans getting mixed in with my certified organic ones? Can the mill prove that they're not?"

With every step the coffee beans have lost weight, and their price per pound has increased. Thievery is possible along the way, but now that the farmer has pure green beans, they're likely to be kept under lock and key—bags of "green"—ready to be roasted. Coffee cherry goes on the market for about \$.50 per pound. Green coffee sells for up to \$10 or more per pound, if it's certified organic. (Bear in mind that it takes ten pounds of cherry to make five pounds of green coffee, which in turn make one pound of roasted coffee.)

Many farmers cut out at this point, and sell their green coffee to larger farms that will mix their beans in with their own and sell them under their own label. Some farmers will sell directly to roasters

either in Kona or elsewhere.

Some farmers continue to handle their own beans. The Kona Coffee Council established a certification program modeled after the wine industry estate labeling program. Estate Grown coffee in Kona is just the opposite of what one thinks of as estate grown coffee in the Third World, where the word "estate" refers to large, mega-agribusiness coffee plantations.

Estate coffee in Kona means the farmer has used small-scale production, most of it done by hand by the farmer and the farmworkers; and has created a paper trail to prove it.

Farmers who handle all aspects of the production of their coffee, from harvesting through roasting, can apply for estate grown certification. This gives them a bit of a reward for their tenacity. ☪



Raking coffee on the roof.

On Habit & Habitat

The Many Shades of Shade

by Dan Imhoff

It is said that coffee is the world's second-most-traded consumer commodity, behind oil (and perhaps arms and illegal drugs). This much is clear: the bean that once emboldened Ethiopian warriors into battle now wields a tremendous power over lifestyles, livelihoods, and habitat.

Twenty million people work on coffee plantations, which cover a total of more than twenty-six million acres (an area larger than Portugal). Two pounds of beans are produced for every person on Earth, of which 20 percent is sold to the United States. An Old World crop that has transformed New World economies, coffee farming has fanned the flames of colonialism and deforestation throughout Latin America, where hundreds of thousands of small forest farmers raise coffee for cash and food crops for subsistence.

Despite its many social and environmental transgressions, the coffee industry ranks among the few in the world in which third-party organizations are simultaneously addressing issues of sustainability including biodiversity, living wages, and chemical-free agriculture (see "Coffee, Certification, and Consumers," p. 25).

In many mountain regions, high-quality coffee can be produced with minimal impacts when cultivated organically and planted in a natural forest canopy of about 50-percent shade. This is particularly important, since the coffee-growing region that spans the Caribbean and Central and South America is also one of vast biodiversity, and these shade grown farms retain desperately needed habitat for many species, including increasingly endangered orioles, warblers, waxwings, and other feathered Neotropical migrants.



"SIESTA IN THE COFFEE COUNTRY"—the distinguished painting by Doris Rosenthal. In the background fine coffee is growing under shade.

Shade works a miracle of flavor in fine coffees



• In cool, dappled shade . . . under an awning of taller trees . . . the finest coffee beans in gay red jackets slowly store up the rich "shade-grown" flavor that has brought Chase & Sanborn the biggest success in 83 years.

• Fine coffees grown under shade add the wonderful "shade-grown" flavor that America loves in Chase & Sanborn. No wonder Chase & Sanborn tastes so mellow . . . so smooth . . . so rich. These fine "shade-grown" coffees explain why more people choose Chase & Sanborn in the past year than ever before in its 83-year history!



VACUUM-FRESH to enable you to enjoy "shade grown" flavor at its very best! Get Chase & Sanborn Coffee in vacuum jar or vacuum can in your favorite grind—today!

**You get "Shade-grown" Flavor in
Chase & Sanborn Coffee**

Traditionally, coffee was grown in mixed forest shade, where the cherries mature slowly, enhancing aroma and taste. Then in the 1960s and 1970s the "Green Revolution" transformed cultivation practices to technified "sun plantations" that destroy the species-rich canopy in order to make room for high-yielding hybrids that require heavy inputs of fertilizers and pesticides. Forest coffee was replaced by industrial monocultures of clearcut coffee. Diverse tree complexes were replaced by living plants, but they could hardly be described as green.

Sun coffee operations, promoted heavily by governments and international aid organizations, turned out to benefit very few parties. They produce large crops of low-quality robusta variety beans. Overproduction means the small growers (there are as many as 250,000 in Mexico alone) who work the land lightly and cultivate a quality bean are squeezed by the sinking prices of flooded international markets. Add to that bitter brew Vietnam's entry into the market in the 1990s, contributing 12 million more bags (10 percent) to an already bloated supply

Right: Chase and Sanborn ad from *Life* magazine, 1947. Courtesy Smithsonian Migratory Bird Center.



by the end of the decade.

"Shade grown" coffee got its start in the mid 1990s when biologists from the Smithsonian Migratory Bird Center (SMBC) began to make the connection between migratory Neotropical songbirds in the North, and habitat and mid-elevation coffee farms in Central and South America, where the birds wintered. In 1996 the SMBC held a seminal conference to release their findings on the importance and value of forest-grown coffee. The report included a scientific explanation of what qualified as biologically beneficial shade.

Coffee importers at the conference, some of whom were already activists in

next urgent frontier in the certification game.

In the world of coffee production and migratory bird habitat, not all shade is equal. Instead shade spans a continuum from the high-altitude, rustic forests with a high degree of species diversity to clearcut plantations where trees are replanted and intentionally pruned, offering little if any wildlife value. According to biologist Russell Greenberg, director of the Smithsonian Migratory Bird Project, "As the level of shade diminishes from rustic forests to mono-layer maintained operations, then to canopy-less sun coffee plantations, species are lost every step of the way."

returns a \$.25/lb. premium to the Migratory Bird Center, and currently has agreements with a dozen importers and more than forty roasters. The long-term goal of the Smithsonian project is to integrate high ecological standards for shade into the already existing organic movement. (This would make certification more efficient and therefore affordable, a constant challenge to ecolabels regardless of product or industry.) Last year, with a grant from the Summit Foundation, the Smithsonian held six workshops to initiate more than seventy organic certifying practitioners into their approach to shade.

The Eco OK approach, on the other



Far left: Shade coffee plantations support more species of birds than any other agricultural habitat. Near left: Sun plantations require intensive application of fertilizers and pesticides, and destroy birds' migration and wintering sanctuaries.

PHOTOGRAPHS COURTESY SMITHSONIAN MIGRATORY BIRD CENTER.

their own rights, were convinced by the idea. Thanksgiving Coffee founder Paul Katzeff quickly became a champion of the concept, and sent importer David Griswold out in search of shade grown coffee that he could market as a high-quality product under a Songbird label. Organic and Fair Trade coffee certifiers have now developed the infrastructure to monitor and provide economic incentives for producers of shade grown. As the coffee commodities market hits an all-time low this year, shade grown remains the

As of early 2002, only two US organizations independently certify shade grown coffee: the Smithsonian Migratory Bird Project (through its Bird Friendly® label) and the Rainforest Alliance, (through the Eco OK label). The differences between the two approaches are striking. Bird Friendly shade must have several components: a diversity of at least ten different noncrop species; differing vertical structure; a 36-foot minimum canopy; and 40-percent coverage of the sky. Bird Friendly certification

hand, seemingly hinges on the principle that working with larger producers with less stringent standards is the best way to shore up tracts of contiguous habitat. Their standards take numerous aspects of farm management into account, though organic is a long-term goal rather than a requirement for certification (a clear differentiation from Bird Friendly). Eco OK combines shade grown management with worker welfare issues, integrated pest management (with a preference for organic production), clean water processing,

and riparian and forest protection.

Outside of Bird Friendly and Eco OK certification, shade grown coffee marketing functions, for the time being, on a certain degree of consumer faith. Conservation International has teamed up with Starbucks and launched a shade grown coffee project within the buffer zones of a biological reserve (see page 15). Songbird Coffee, from Mendocino, California-based Thanksgiving Coffee, is a cause-related marketing program that returns 15 cents per pound or package to the American Birding Association.

Sustainable Harvest is one of the largest importers of organic, Fair Trade and shade grown coffee. They supply many specialty coffee retailers, and make their own onsite assessment and documentation of the certified organic producers they market as "shade grown," paying the extra costs of shade certification only when a customer demands it. "Nine out of ten times when you buy both Fair Trade and organically certified," says owner David Griswold, "your chances of benefiting wildlife are high."

With two-thirds of the world's coffee coming from New World producers, the last decade's work has focused on Central and South American countries. As shade develops into a global agricultural standard, research on the conditions in Southeast Asian and African forests will be necessary as well.

The onus to develop these rigorous ecological standards will probably fall on the shoulders of the Consumers Choice Council and the Specialty Coffee Association of America.

From a bird's-eye perspective, the ideal natural forest would not include coffee production. Even the best shade grown coffees—in the rustic forests at mid-elevation ranges of Mexico and Peru, for example—are farmed in highly managed settings. Trees are thinned and regenerated to allow for planting. Some species, such as leguminous trees that fix nitrogen, may be

avored over the natural species mix. "Coffee is not *that* shade tolerant," admits the Smithsonian's Greenberg. Still he says, "not all shade should be endorsed, either. I would not feel comfortable [certifying shade grown coffee] below a certain level of diversity."

Shade Grown Coffee Country

A few years ago, to see a shade grown plantation for myself, I journeyed to the remote village of Pluma Hidalgo in Oaxaca, Mexico, an area as famous to coffee gourmands as Bordeaux is to wine lovers. The region is now in the process of Bird Friendly certification.

I spent the afternoon hiking with certified organic coffee farmer Pablo Perez Ramos. Ramos farmed three hectares (close to seven acres) with two full-time workers and a seasonal crew of eight migrant pickers, who travelled from as far away as Guatemala to earn eight to ten dollars a day.

Pablo and I set out on a burro trail that traversed a steep grade toward the mountain. Trees ninety feet tall towered above the shoulder-high coffee plants. Their hand-sized leaves were thick and shiny.

Pablo identified many smooth-barked, deciduous trees he called *henequil*, (most probably of the *inga* species), the perfect complement for coffee plantations because they provide much-needed shade and fix nitrogen into the soil, which in turn helps fertilize the plants. As part of his organic practices, Ramos mixed the leaves with coffee hulls, burro dung, ash, and other matter to create compost, which he lavished at the base of every coffee plant to maximize seasonal output. He was serious about compost, handling it, explaining how important it was for each plant, no matter how steep the grade, offering me his homemade organic fertilizer to inhale. At one point, Pablo sighted a

bird in an upper branch of the forest. "*Pajaro del norte*," he said. A migratory bird. It was a Cedar Waxwing, with a tufted crown, gray body, and highlights of black, red, yellow, and white.

"It's a hard life," Ramos told me, slashing at a branch with his machete. "We're doing everything, growing organically, growing in the shade to protect the migrating birds. We have great aroma and taste. But we can't get a fair price."

Back at home, migratory songbirds are commencing their northern flights throughout the continent, an annual pilgrimage which, if not seen as miraculous, should at least be revered as sacred. A recent report, "Common Ground Common Future," asserts that, unless changed, agriculture (particularly in the biodiversity hotspots throughout Central and South America where coffee is grown) will push many species to extinction within the next fifty years. And every day, consumers around Western nations turn, out of ritual and habit, to the bean that could link us, consciously, to our broader relationships and responsibilities throughout the planet. **we**

Dan Imhoff is a writer and founder of the non-profit publishing house, Watershed Media. He is the author of *Building with Vision: Optimizing and Finding Alternatives to Wood* (reviewed in *Whole Earth*, Winter 2001) and the forthcoming *Farming with the Wild: Strategies for Enhancing Biodiversity on Farms and Ranches* (2003).

Right: Scarlet Tanagers often visit shade coffee plantations in the Andes during the winter, and in Mexico and Central America during migration.

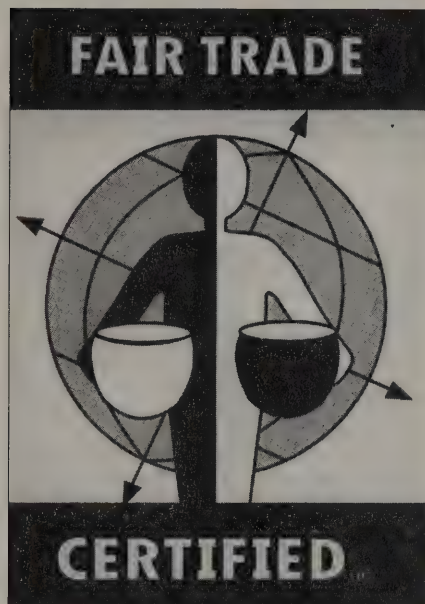


SMITHSONIAN MIGRATORY BIRD CENTER



Coffee, Certification, and Consumers

by Mark Inman



For the past several years, coffee countries have been in crisis. Farmers have been facing twenty-year lows in pricing for the past three years, from a high in the early nineties of over \$2.25/lb., to the current \$.43/lb. This crisis causes farmers to abandon their land and migrate toward urban areas to find menial work, or to illegally immigrate to more financially stable countries. It tempts some farmers to replace their coffee trees with coca, which draws them and their families into servitude to drug cartels, and forces them to destroy the fertility of their land.

For other farmers, the low prices create incentives to opt for industrialized, high-quantity production of low-quality coffee hybrids that grow in full sun and depend on high-chemical inputs and mechanized harvesting. With this agricultural shift has come massive deforestation, and population decline of migratory birds and other key species (see "Shades of Shade," page 22).

This crisis can also spark uprisings and civil wars in these financially and

politically unstable countries, forcing the consumer countries (predominantly the US and the European Union) to use military force to stabilize them.

Fair Trade, shade grown, and certified organic programs were created in part to counteract these effects of the commodities market. The terms have become buzzwords for coffee drinkers around the world.

In the specialty coffee industry today there is much controversy about the virtues of the various forms of certification: the verifiability of organic; the economic viability of shade grown; the ability of Fair Trade to improve the coffee producer's lot.

To make sense of this discussion the consumer needs to understand these terms as well as the consequences of the low value that is currently placed on intensely handcrafted high-quality coffee.

It's All in the Details

Shade Grown and Bird Friendly

This designation (see page 22) ensures that multiple species have habitat, and that dwindling tropical rainforests are preserved. But shade grown coffee is not necessarily organic and does not necessarily address socio-economic issues.

Fair Trade

Fair Trade addresses primarily the price points at which coffee is sold and traded on the world commodity market. Coffee, like oil, pork bellies, and frozen concentrated orange juice, is traded on a market based on speculation and futures.

Fair Trade ensures a "floor" price that allows farmers to make minimum profits in low markets. Fair Trade farmers receive a guaranteed minimum of \$1.26 for nonorganic

coffees and \$1.41 for certified organic coffees. Like shade grown and certified organic coffee, Fair Trade is a work in progress and not a panacea for the present crisis.

The Fair Trade program's limitation is that only cooperatives democratically operated along detailed guidelines laid down by Transfair USA (the certifying agency in the US) can apply. However, many traditional coffee farms are not co-ops. They can be privately owned or run in a tribal or communal setting. Such structures may produce premium coffee using strict environmental guidelines, pay decent wages, and provide humane working conditions for their workers, but they cannot earn the Fair Trade label and premium. Despite claims to the contrary by Transfair USA, its guidelines do not adequately address issues surrounding the environment, biodiversity, species preservation, or whether or not the coffee trees come from genetically modified rootstocks.

Certified Organic

Organic farming is more about relationships than simply "chemical-free" farming. The checks and balances that result from an organic system come from the interaction of a wide variety of life-forms that run the gamut from bacteria and rhizomes below the ground, to pollinators and flowers above the ground, to bears crapping in the woods on the ground.

Organic certification ensures that the coffee is grown without the common pesticides, herbicides, and fungicides used on coffee, many of which are banned in the US. Buyers of certified organic coffees offer a premium to farmers (around 40 cents above the commodities market). Even when world coffee markets are low, as they are now, certified organic farmers are still able to make a profit.

The purchase of certified organic coffee allows small farms to compete against larger coffee interests. In many Third World countries, the division of wealth is unevenly distributed (a few wealthy, many poor, and almost no middle class). Organic certification, similar to the Fair Trade system, helps to close the gap. (In order to be sold internationally as organically certified, the local certifier within the country of origin must be certified by IFOAM, the International Federation of Organic Agriculture Movements. This is also true for American products sold abroad as organic.)

The fly in this ointment is that certified organic coffee commands different prices in different geographic locations. For example, an organic farmer in Costa Rica or Sumatra may use the same growing practices and produce the same quality of coffee as organic farmers in Mexico, Peru, or Bolivia. But because the Costa Rican and Sumatran yields are so much smaller, their coffees will generally receive premiums far above the organic Fair Trade floor price. Mexico and Peru are the two largest organic coffee producers in the world, so the size of the yield automatically forces the price down.

Changing Our Perception of Coffee

What do low prices mean to you, what do they mean to the environment, what do they mean to the people who grow the world's premium coffee beans?

Most specialty coffee companies purchase the top ten percent of the quality of all the world's coffee. The numerous smaller specialty coffee companies, such as Taylor Maid Farms, Batdorf, Bronson, and Intelligentsia are buying very small quantities, relatively speaking, and therefore are able, as buyers, to skim the top three percent of the quality of the coffee.

You are now able to go to a super-

market or café, purchase the highest-quality coffee in the world, and go home and brew yourself a cup for twenty-five cents.

Nonindustrialized coffee—the coffee that is good for birds and soil, as well as for farm workers—requires ten times the hand attention of wine production, five times more than chocolate and cigar production. In fact, on average thirty-six humans touch your pound of coffee before you grind and brew it. What quality of wine, chocolate, cognac, or cigar do you believe you would get for twenty-five cents a serving?

The coffee crisis is not so much about a global glut of coffee as it is about the public's perception of specialty coffee. Americans were raised on bottomless cups that cost around three cents a serving. Coffee was the stuff of breakfast that you used to wash down toast.

But times have changed. Coffee consumers are beginning to understand the complexities of coffee, yet in their wallets they still carry the memory of the price of a 2-lb. can of Maxwell House. Supermarkets have jumped on the "coffee boom" bandwagon of specialty coffee, and are now responsible for 74 percent of all specialty coffee sold, yet they still will not allow coffee companies to offer products for over ten dollars a pound.

In reality, coffee should be selling to the consumer for over \$20/lb. This increase (only changing the price per cup for home use from twenty-five cents to forty cents) would eliminate the chain of poverty and destitution that plagues so many farmers worldwide. If we are willing to invest more in the quality of farmers' products, consumers in turn will receive a more environmentally and socially just cup.

Fair Trade, shade grown, and certified organic are simply verifications for consumers that *minimum* controls are in place to ensure balanced agriculture and social elements.

**Certification
labels are not
the complete
answer to the
plight of the
farmer.
You are.**

Yet in the entire coffee industry (specialty and nonspecialty), organic coffee represents one percent of the entire world market. Fair Trade represents 0.5 percent, and shade grown represents 0.25 percent. In the specialty coffee market, organic coffee represents 6 percent of the entire market; Fair Trade represents 3 percent, and shade grown represents one percent.

Certification labels are not the complete answer to the plight of the farmer. *You are.* Any industry is built on consumer demand. The attention to detail needed to produce better coffee almost requires farmers to utilize growing methods that are more sustainable than conventional methods. It also requires that the coffee industry use business practices that are supportive of both the environment and the humans working in coffee production. Without that demand—and consumers' willingness to back the demand with their dollars and euros—the percentage of coffee meeting even minimum certification standards will remain minuscule. ☞

Mark is the cofounder and roastmaster of Taylor Maid Farms, president of the Organic Coffee Association of America (ORCA), and a board member of the Specialty Coffee Association of America. He is a fourteen-year veteran of the coffee trade, specializing in certified organic and Fair Trade coffees.



Coffee Resources

FAIR TRADE

These organizations promote and sell Fair Trade coffee, and have been instrumental in creating the Fair Trade guidelines being used by coffee companies today.

TRANSFAIR USA

1611 Telegraph Avenue
Suite 900
Oakland, CA 94612
510/663-5260
www.transfairusa.org

The US certifier for Fair Trade Certified® coffee. See them for info on sellers of licensed roasters.

EQUAL EXCHANGE Fairly Traded Gourmet Coffee

251 Revere Street
Canton, MA 02021
781/830-0303
www.equalexchange.com

A worker-owned co-op, Equal Exchange says that it sells more Fair Trade Certified coffee (retail and wholesale) than any other company in North America.

RAINFOREST ALLIANCE

65 Bleecker Street
New York, NY 10012
888/693-2784, 212/677-1900
www.rainforest-alliance.org
Website includes sources for products from Eco-O.K.® certified coffee farms.

THANKSGIVING COFFEE COMPANY

PO Box 1918
Fort Bragg, CA 95437
800/462-1999
707/964-0118
www.thanksgivingcoffee.com
One of the leading proponents of shade grown coffee.

BAT MAGIC COFFEE

Bat Conservation International (BCI)
Catalog Sales
PO Box 162603, Austin, TX 78716. 800/538-BATS
www.batcon.org
Proceeds from sales of this certified organic, Fair Trade, shade grown coffee (which can be purchased through Bat Conservation International's catalog) support BCI's work protecting bat habitat.

HOME ROASTING

ROASTYOUROWN

2504 SE Taylor Street
Portland, OR 97214
888/30-ROAST
www.RoastYourOwn.com

One of the largest importers of sustainable coffee in North America. They sell green beans by mail.

GROUND CONTROL

Free. 7095 Hollywood Boulevard, #714
Hollywood, CA 90028
800/779-7578
www.coffeeproject.com

A good snailmail newsletter produced by the Coffee Project (see page 36) with lots of helpful information about home roasting and reader exchange of advice.

KONA COFFEE

KONA COFFEE LIVING HISTORY MUSEUM

PO Box 398
Captain Cook, HI 96704
808/323-2006
www.konahistorical.org

The source for information on the history of coffee in Kona.

DRAGON ROAST COFFEE

PO Box 230
Honaunau, HI 96726
808/328-9447
www.dragonroast.com
Biodynamic Kona Coffee.

CANOPY COFFEE COMPANY

808/328-0527
One-hundred-percent Kona bird-friendly coffee grown in the Ohia forest. Peter Marshall says, "This is smooth and nonacidic and sings of ios and elepaos."

MORE READING

COFFEE

Spilling the Beans
The New Internationalist
No. 271

Back issues \$4.50
1011 Bloor Street West
Toronto, ON M6H 1M1
Canada
www.newint.org

This special issue (September, 1995) explores the coffee industry by following a Peruvian farmer as he traces the progress of a coffee bar in London.

A WIN/WIN/WIN/WIN INDUSTRY FOR THE TROPICS

Why Your Daily Fix Can Fix More than Your Head
World Watch Magazine
Vol. 15. No. 3
Worldwatch Institute
1776 Massachusetts Avenue, NW
Washington, DC 20036
www.worldwatch.org

This article about shade grown coffee, in the May/June 2002 *World Watch*, features a good analysis of the ecology of forests, coffee, and birds.

COOK'S ILLUSTRATED

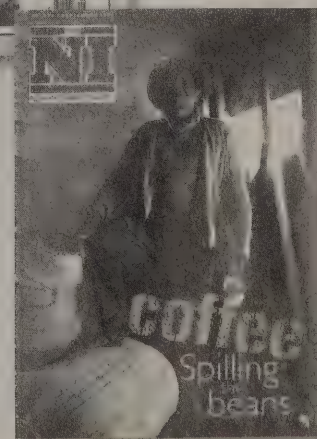
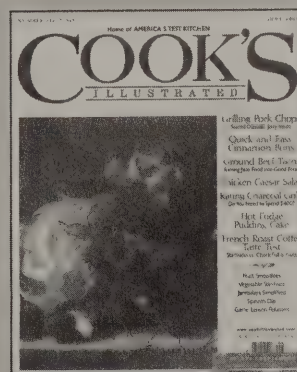
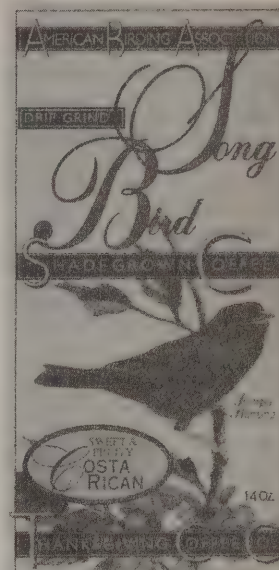
Christopher Kimball, ed.
\$29.70/year (6 issues)
17 Station Street
Brookline, MA 02445
800/526-8442
515/246-6911
www.cooksillustrated.com

This is a great magazine for people who eat—with fine product reviews and concise information, beautifully presented.

COFFEE TIMES

Les Drent, ed. PO Box 1092
Captain Cook, HI 96704
www.coffeetimes.com

Good insightful discussion of Kona coffee, Hawaiian history, and general Hawaiiana.



SHADE GROWN

SMITHSONIAN MIGRATORY BIRD CENTER

National Zoological Park
Washington, DC 20008
www.nationalzoo.si.edu/smbc/start.htm

Conducts research and offers educational materials on the impact of forest loss on migratory birds. See website for sources for certified, organic, shade grown Bird Friendly® coffee.

Coffee and Health

Good to the Last Drop?

by Thalia DeWolf

Is coffee a tonic, or a toxic brew? If the question is confusing, so are the answers. Is it good or bad for your body? Does it cause cancer, PMS, and vitamin deficiency? Or is it a super antioxidant that prevents cirrhosis of the liver? We asked Thalia, who daily confronts her own coffee quandary, to sort through the conflicting claims.

—SGS



Dr. Laura Catena downs several cups of coffee every day.

Java. I love it. I hate it. Every morning I pad into the kitchen and turmoil jumps out of my cupboard. Should I have a cup? Caf or decaf? A gravely voice intones in my head, "You shouldn't be drinking that possibly wicked black juice at all! You might get cancer or an ulcer or yell at the kids or have a nervous breakdown! Have a nice cup of broccoli-soy-seaweed juice or some other good cancer preventive." Then a whiny "Awwww come on! It can't be that bad! Tons of people drink gallons of coffee and they're OK. And mmmmm... that lush bitter taste, the electric thrill of the zing! Come on! You'll get more done."

The arguments aren't necessarily logical, but the battle rages. So what do the experts say? Is coffee good for you or not? Should I drink it at all? Caf or decaf? What is "moderation"?

Other coffee lovers and I have been hearing for years about alleged links between coffee and a plethora

of ills; the biggies are cancer, fertility and birth issues, osteoporosis, and heart disease. Every side with an interest in this question draws on its own bank of experts, credentialed researchers, and files full of studies. In this article, I've highlighted reports from across the spectrum—the coffee industry, consumer watchdogs, and both allopathic (traditional) and naturopathic medicine.

Coffee Science Source, sponsored by the National Coffee Association, concludes that "decades of research and centuries of human consumption confirm the safety of coffee and caffeine....The US Food and Drug Administration still considers caffeine to be 'generally recognized as safe.'"

On the basis of CSS's summary of current research ("collected from scientific journals, industry, reports, and reviewed by experts in the field"), we can and perhaps *should* be drinking two to four cups a day.

Coffee's benefits, according to

CSS, include lowering the risk of colon cancer (by 25 percent), gallstones (by 45 percent), cirrhosis of the liver (by 80 percent), and Parkinson's Disease (by 50 to 80 percent), and reducing the incidence of asthma (by 25 percent). With four times the amount of antioxidant as green tea, maybe coffee is the next health food and we can all look forward to enhanced performance, memory, and (of course) energy.

Citing various scientific studies, CSS finds no link between coffee and miscarriage, premature birth, birth defects, low birth weight, infertility, or SIDS. They say that 300 to 400 mg of caffeine a day is safe for pregnant women, but that the extra-cautious may want to consume only 200 mg a day (see chart on next page for caffeine content in various products). CSS notes that decaf may be linked to miscarriage, but says that studies are not well controlled.

CSS also unlinks coffee and many other health problems: cancer,

Thalia DeWolf is a freelance writer and "dancing, writing home-schooling mama" who lives in Sonoma County, California. She coauthored "Got Kids? Tools for Navigating Parenthood" in the Spring 2002 *Whole Earth*.



hypertension, reflux, anxiety, cardiovascular disease, osteoporosis, and breast pain from fibrocystic breast disease. CSS offers a few caveats. For instance, women who drink five cups of coffee or more a day are encouraged to drink at least one cup of milk a day to offset loss of calcium.

[Researchers have determined that the more coffee a woman drinks, the more calcium she excretes through her urine, but they have yet to identify the mechanism. The loss amounts to about five milligrams of calcium for every six ounces of coffee or two cans of cola, according to Janet Barger-Lux of Creighton University's Osteoporosis Research Unit.]

CSS notes a temporary but "harmless" rise in heart workload in men with hypertension if they drink more than three cups a day, and a similarly harmless rise in blood pressure. Five percent of us will experience a headache when we remove caffeine from our diets, and boiled unfiltered coffee can negatively affect serum lipids. Women with fibrocystic breast disease may be more sensitive to caffeine and should moderate their caffeine intake if they notice breast discomfort. Some very sensitive people may be more prone to anxiety with caffeine, says CSS.

The Center for Science in the Public Interest is the nonprofit consumer organization that brought us nutritional information labeling on food. They focus on improving the safety and nutritional quality of our food supply and "working to ensure advances in science are used for the public good."

In 1996, CSPI published a special section, "Caffeine: The Inside Scoop," in its *Nutrition Action Healthletter* (NAH). They cited some science that you and I already know, confirming the reality of the coffee withdrawal headache and disturbed sleep. However, and contrary to pop-

ular belief, they concluded that coffee won't sober you up and won't help you keep your weight down over the long term.

CSPI paints a dimmer picture for coffee-drinking women than the coffee industry does. Though studies on PMS and breast lumpiness are still inconclusive, CSPI asserts that pregnant women who consume 300 mg of caffeine or more a day are twice as likely to miscarry and that consuming 150 mg to 300 mg of caffeine makes a woman twice as likely to have a low birth-weight baby (five times more likely if she consumes more than 300 mg). CSPI recommends drinking decaf or cutting back on caffeine consumption for women trying to conceive, taking a tablespoon of milk or yogurt for every cup of coffee to offset calcium loss (and, better still, consuming a whole cup of milk or yogurt per cup of coffee to build healthy bones).

CSPI seems just as adamant as the coffee industry in concluding that cancer (anywhere in the body) is not linked to coffee consumption. They also say that paper-filtered coffee has no affect on cardiovascular disease.

Studies conducted over the past three years and cited in *The Journal of the American Medical Association* (JAMA), one of the pillars of allopathic medicine, show no links between coffee and hypertension or heart disease. The risk of Parkinson's Disease is decreased in one study, as is gallstone disease.

In 1999, *The New England Journal of Medicine* (NEJM), another leading mainstream publication, printed a study by scientists at the National Institute of Child Health and Child Development that suggested that one or two cups of coffee a day might not raise the chances of a miscarriage, but that risks more than doubled for women drinking more than five cups a day.

In the same NEJM issue, Brenda

Eskenazi, professor at UC Berkeley's School of Public Health and director of the university's Child Environmental Health Resources, responded in a scathing editorial that cited several other studies associating moderate amounts of coffee with changes in fetal heart rate and breathing patterns, among other effects.

Eskenazi examined data that explain how pregnant and lactating women, and their babies, metabolize caffeine differently and more slowly than do other people. She lamented the lack of public awareness about the adverse effects of caffeine on childbearing women and their children, noting that a 1981 FDA recommendation that pregnant women avoid caffeine-containing foods and drugs, if possible, or consume them only sparingly "has not percolated down to the general population.... And no advisories have targeted breast-feeding women or parents of young children."

Eskenazi states that "caffeine, like nicotine...meets some of the criteria of the World Health Organization and the American Psychiatric Association for a drug of dependence." She wants the FDA to adopt legislation (proposed by CSPI in 1997) that would label the amount of

Caffeine Content, in mg

No-Doz extra strength tablet	200
Drip robusta coffee, 8 oz.	150
Percolated robusta coffee, 8 oz.	110
Jolt, 12 oz.	100
No-Doz regular strength tablet	100
Drip arabica coffee, 8 oz.	95
Espresso, from arabica, 1.5-2 oz.	85
Percolated arabica coffee, 8 oz.	75
Instant coffee, 7 oz.	65-100
Excedrin tablet	65
Imported tea, 7 oz.	60
Mountain Dew, 12 oz.	54
Coca-Cola, 12 oz.	46
Domestic tea, 7 oz.	40
Dr. Pepper, 12 oz.	40
Pepsi Cola, 12 oz.	38
Midol tablet	30
Decaf coffee, 7 oz.	2-4

caffeine in foods.

The *American Journal of Clinical Nutrition* (AJCN) has published seventeen studies in the past five years that examine the link between coffee and cardiovascular disease. Recent research (February 2002) showed that high consumption of unfiltered coffee (one liter) caused an elevation in tHcy, the amino acid which indicates "an increased risk of cardiovascular morbidity and mortality."

Other reports in AJCN suggest that caffeine may exacerbate the role of genetics in causing bone loss in elderly women, though drinking tea seems to increase bone density.

Michael Traub, president of the American Association of Naturopathic Physicians, and director of Lokahi Health Center in Kailua Kona, Hawai'i (where Kona coffee is grown), would rather have us reach for a cup of green or black tea instead of coffee when we want a buzz. His notion of moderate coffee consumption is a cup every other day or a few times a week, in individuals whose constitutions tolerate it. He says caffeine is physically addictive and overused. He recommends reducing the addiction slowly (50 percent a day) and then using coffee infrequently, thereby increasing the potency and decreasing exposure to potential problems. Pregnant or lactating women, and both members of couples trying to conceive, shouldn't drink coffee at all.

Coffee, according to Traub, comes with a host of unwanted health problems including sleep disturbances, PMS, decreased immune function, reflux, vitamin and mineral deficiency, and possibly cancer.

Traub's research indicates that coffee has many carcinogens besides caffeine—creosote, pyridine, tars, and polycyclic aromatic hydrocarbons to name a few—so decaf is guilty here too. "There is a suggestion of a higher incidence of cancers of the

pancreas, ovaries, bladder, and kidneys in coffee drinkers."

Traub paints a dark picture when it comes to coffee and stress response. He reports that our adrenal glands become exhausted as coffee pumps up our stress hormones. Anxiety builds and builds as coffee depletes us of adenosine, which should help to calm us. Coffee elevates levels of lactate, which increases the onset of panic attacks in many people. Coffee increases blood pressure and makes blood vessels constrict, which puts more pressure on the heart. Coffee can also nullify the effects of expensive blood pressure medications used to control such problems.

Coffee, according to Traub, is an especially unwelcome guest for couples in the baby-making phase. He says that it increases female infertility up to 50 percent, is linked to deformed sperm, and can decrease sperm motility. In pregnancy it increases risk of miscarriages, breech births, delivery complication, and low birth weight. "Fetuses and newborns cannot metabolize caffeine in their livers, so it remains in their bodies for up to four days."

So...what can I conclude from all this conflicting testimony? What will jump out of my cupboard now? If there's any consensus about coffee

consumption, it's moderation, moderation, moderation, of course.

But the experts all have different standards for "moderation." CSS would have us drink two to four cups a day, which they say is 300–400 mg of caffeine. But drinking one cup, at 100 mg, is considered moderate in many of JAMA's studies. Traub would have us use this "drug" only every other day at the most. Pregnant women should err on the side of caution, 100 mg a day (NEJM, 1999), or not at all (Traub). That is as much as they agree on.

My advice is to look at your own cupboard carefully. Experiment. Allopathic or naturopathic, no advisor could possibly tell you the absolute truth for you. The standards for getting the right nutrition (calcium, folate, B vitamins) seem to hold especially strong here for all, but what's your picture? Are you overweight, over forty and female (risk factors for gallstones)? Then maybe you can err on the side of lower-level moderation. Or could you possibly live without coffee and panic attacks? If you need a pick-up, and think that you are being moderate by consuming one monster-sized cup, or a killer-triple-espresso with just a sprinkling of chocolate-covered coffee beans, maybe what you really need is a nap. **we**

FOR FURTHER INFORMATION:

COFFEE SCIENCE SOURCE

15 Maiden Lane, Suite 1405
New York, NY 10038
212/766-4007
www.coffeescience.org

CENTER FOR SCIENCE IN THE PUBLIC INTEREST

1875 Connecticut Avenue
NW, Suite 300
Washington, DC, 20009
202/332-9110
www.cspinet.org

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

Unified Service Center
American Medical Association
PO Box 10946, Chicago, IL
60610-0946
800/262-2350,
312/670-7827
jama.ama-assn.org

NEW ENGLAND JOURNAL OF MEDICINE

10 Shattuck Street
Boston, MA 02115
617/734-9800
content.nejm.org

THE AMERICAN ASSOCIATION OF NATUROPATHIC PHYSICIANS

8201 Greensboro Drive,
Suite 300
McLean, VA 22102
877/969-2267,
703/610-9037
www.naturopathic.org



Java without the Jive: coffee substitutes

My homeschooling mamas' group meets at night. We feast and yak. The food (and the yak) is great but, sheesh, was I getting sick of herbal tea!!! I love love love coffee, but even decaf kept me up after our rants. I really wanted java but without the jive. I needed that hot bitter sweet milky yummy without the eye-opening buzz. So I ventured into the wild world of coffee substitutes, dragging my support group through that jungle with me. (Barley, chicory, and rye are the most common ingredients in these drinks, though many other herbs, grains, fruits, and veggies can be used.)

Many had gone before me and given up hope. Nothing can taste like coffee except coffee! True, true. Each week I brought a different version. None of them really tasted like my true love, but each week I found myself, and the others, falling for the flavors of the substitutes in their own rights. We swapped notes on the overtones, the prices, the recipes. The intimacy built and we have settled on a few favorites. Each of us knows exactly how the others take theirs—black, or with soymilk, cow milk, sugar. We pour out the warm cups as the crowd arrives, and, without words, doctor it up perfectly. Here are the ones we tried out. We found all of them in local supermarkets or natural food stores.

Pero. We like this one the best, though it is almost twinned to Roma and Inka. The flavor is rich, mildly bitter, and almondy. It smells roasted but sweet. At \$.03 per teaspoon (the recommended dose per cup) it's a good deal, though we all liked the recipe doubled. Instant (add water and stir).

Roma was second for most tasters,

but very, very close to Inka and Pero. The flavor is also mild and bitter, but a bit smokier, and the aroma is almost coffee-esque. \$.07 per teaspoon. Again, we double the recipe. Instant.

Inka is the smokiest and most bitter of the top three, but mild and pleasant. It smells deliciously like dark, maybe even burned, coffee. At \$.02 per teaspoon, it's the best deal. Like the first two, this one wants a double serving per cup. Instant.

Caffix. Much sweeter and milder than the top three, this one has slightly malted but still bitter flavor. The smell is soft and kind of sweet potatoish. It makes a wonderful latte, and is widely available, even in cafés. \$.04 a teaspoon, but you can almost triple it for a great taste. Instant.

Teecino (java flavor) offers bitter, mild caramel flavor in a grind that you brew like coffee: drip, filtered, or French press pot. Yummy with milk and sugar. \$.21–\$.34 per cup. Also nice doubled.

Postum. Burnt molasses taste with a sweet smell. Not much like coffee, but it does have some bittersweetness. Makes a great warm nighttime drink. \$.06 a teaspoon and, you guessed it, we all preferred it doubled. Instant.

Diva Java. Very malty, sweet, spicy with a very, very milky base. We wanted to like this one (the label is so cool), but most of us found it kind of

revolting—too milky, too malty, too groovy. \$.46 a cup. One tablespoonful per cup was plenty. Instant.

Raja's Cup. Unbearably bitter, medicinal when brewed as directed (boiled for five minutes). Tolerable when brewed lightly for three minutes in just-off-the-boil water, with milk and sugar. Gives you a clear



blast of herbal bitterness. \$.05 when brewed like coffee or \$.17 a cup in tea bags.

None of these substitutes has any caffeine at all, and most have no sugar or fat. Some can be used to cook with or make iced drinks. Many are delicious over ice cream. Some of our crazy kids even like them.

—Thalia DeWolf

Shaky Grounds

The Pharmacology of Coffee

by Dale Pendell

Common Names: Coffee. Kahvey. Java. Crank. Bean. Joe. Go Juice. Ambition.

Taxonomy: The genus *Coffea* is part of the Rubiaceae, one of the largest families of flowering plants, including gardenias. The family is widely represented in the tropics, where it occurs as trees or shrubs.

Alkaloids are common throughout the family. Only two *Coffea* species are widely cultivated: *Coffea arabica* and *Coffea canephora*, known in the trade as robusta.

The best coffee comes from *Coffea arabica*, the original source of the highly prized beans. Wild populations are very difficult to find, and even those few that are found to be growing without human aid are probably feral.

The highlands of southwestern Ethiopia are considered to be the original homeland of *Coffea arabica*, and that is where its greatest genetic diversity is found. While the flower is fully capable of cross-fertilization, the tree is so self-compatible that the majority of the fruits are usually self-fertilized.

Since the middle of the nineteenth century, explorers and botanists have discovered scores of truly wild species of *Coffea* in the mountains of tropical Africa and Madagascar. The Madagascar coffees have been isolated from Africa since the Cretaceous era and are most distinctive from their African relations by their lack of caffeine. Nonetheless, the Madagascar coffees and a number of the African species can still hybridize.

Part Used: The seeds, mostly. In Arabia the pulp is fermented into an

alcoholic beverage. In Malaysia and Indonesia, and in some parts of



normal web

Latin America, the leaves are used to brew a tea.

Chemistry: The principal alkaloid is caffeine. Two related xanthines, theobromine and theophylline, are often present in smaller amounts.

Caffeine occurs in the leaves as well as in the seeds. The caffeine content of green *Coffea arabica* beans varies between 0.6 and 1.6 percent. The caffeine content of robusta is higher, usually between 1.2 and 3.2 percent. However, robusta lacks many of the flavorings found in arabica, so is most often used for extracts and instant coffees.

In addition to the alkaloids, the beans contain trigonelline, amino acids, proteins, enzymes, carbohy-

drates, polysaccharides, quinic and associated chlorogenic acids, oils, a wax that coats the bean, a few pigments, and at least 180 volatile compounds.

Roasting alters the chemistry significantly, of course. Around ten percent of the caffeine vaporizes, even more in a darker roast. Perhaps the greatest effect of roasting is on the carbohydrates, which are highly pyrolyzed (i.e., burned—*Ed.*). Roasting also destroys most of the trigonelline, converting it into nicotinic acid (niacin), nicotinamide, and a score of volatile aromatics. Most of the volatile compounds remain trapped within the beans.

Chemists, in partnership with trained coffee tasters, have been able to identify and characterize an astonishingly large number of the flavor constituents of coffee. Like wine tasters, coffee tasters have developed a specialized vocabulary to analyze the complex flavors and feel of a cup of coffee. "Acidity" is distinguished from "sourness," and "bitterness" is distinguished from "astringency" (though molecules that are astringent are sometimes also bitter). Humans have no taste receptor for astringency, but the chemists have been able to correlate astringency with a molecule's ability to precipitate salivary proteins and glycoproteins.

Investigations indicate that the astringency in coffee, especially that with a "metallic" aftertaste, seems to correlate with the relative quantities of caffeoylquinic and dicaffeoylquinic acids in the bean.

On the chemical side, analyses have been made on scores of compounds contributing to the coffee

Adapted with permission from *Pharmako/Dynamis* (2002; Mercury House; see review, page 38).



aroma. Many of the breakdown pathways from precursor compounds in the green bean to the compounds found in the roasted bean have also been traced. But because of the sheer number of compounds involved, and synthetic reactions occurring among the breakdown products, the chemists are quick to admit these exercises as yet have little predictive value in determining which green bean will develop what particular flavors.

The character of "body," the mouthfeel of coffee, has proved chemically elusive. It has been demonstrated that there is no simple relationship between body and viscosity. Experiments suggest complex interactions between bitterness receptor sites, astringent phenols that could bind to them, and salivary proteins. At present, "body" is still the venue of the tasters, as is detecting subtle differences between "papery" and "woody," "grassy" and "green," and "earthy," "brickly," and "cereal."

Snore.

No. Wake up now. Have a cup of coffee.

How Taken: The oldest method is probably chewing the seeds. In Ethiopia the beans are cooked in butter and made into cakes. In Yemen and other Arab countries the seeds are ground by the woman of the house in the morning by pounding. This sometimes creates problems for people living in apartments. Before the coffee may be drunk the preparation of the coffee must be praised by the eldest male.

Effects: To spare spouses and others from being cursed first thing in the

morning, which impulse is itself at least partially the result of the coffee you drank yesterday.



web by spider on caffeine

The Plant: Coffee grows naturally as an understory plant in the tropics as a shrub or small tree. It can grow to a height of over twelve feet, but is usually pruned in ways that increase its bushiness, leafiness, and ease of harvesting. The white flowers give off a delicate fragrance.

Until recently, nearly all coffee was grown in the shade, in conditions mimicking its natural environment. Growers plant as many as forty different kinds of trees as canopy cover, and a rich ecosystem develops, with epiphytes, mosses, birds, and other wildlife. Today more and more coffee is being grown in cleared "sun planta-

tions." While these sun plantations are better suited to the capital-and-fertilizer-intensive methods of agribusiness, they offer no habitat for the hundreds of birds, the innumerable insects, and the other animals found in the traditional farms.

Odd calling a coffee plantation "traditional."

In the cleared plantations, special care has to be taken to protect young plants from the excess of sunlight. Lack of biological insect control necessitates using more pesticides, as lack of humus and plant litter necessitates using more chemical fertilizers. The result is that sun grown coffee beans are more expensive by the pound to produce than shade grown coffee, even though the yield per acre is higher. If you can buy shade grown coffee, do so.

The cover trees used in shade plantations often include species of *Acacia*, *Cassia*, and *Erythrina*. And since *Salvia divinorum* grows well under coffee trees, certain three-level plantation designs come to mind that could be highly viable both ecologically and spiritually, as well as economically.

How Taken: As a beverage, in a cup, extracted with hot water by refluxing ("percolated coffee"), by percolating ("drip coffee"), or by decoction ("campfire coffee").

Drunk in a demitasse, as espresso. With milk, as café au lait or caffè latte. With steamed milk with foam on top, as cappuccino. From a styrofoam cup, at public meetings. From a thermos, directly.

On occasion, squirted through a rubber tube and plastic syringe, as a colonic enema. ☞

The Daily Grind



Cook's Illustrated tests countertop coffee grinders

by Adam Ried

Just as corn on the cob tastes best if it's boiled within minutes of being picked, coffee tastes best if the beans are ground fresh before they are brewed. With a wide variety of countertop coffee grinders on the market, it is no problem for home cooks to grind beans on demand. The greater challenge is deciding which grinder to buy. Most of the reasonably priced grinders, which generally cost around \$20, employ propeller-type blades that work like a blender, chopping the beans as they spin. But any coffee enthusiast will quickly allege that blade grinders are rife with problems—they grind unevenly and produce too much superfine coffee dust, and the friction from the blades overheats the coffee grounds. We wondered if any of this would affect the flavor and body of the brewed coffee or if these allegations barely amounted to a hill of beans.

With a self-imposed price cap of \$50, a limit that allowed us to include several low-end burr grinders (a fancier type of machine that works like a motorized pepper mill) we bought ten popular models from seven manufacturers and 30 pounds of coffee beans.

Grinding Tests

We tested each unit by grinding 2 ounces of coffee beans (about 8 tablespoons) and using those grounds to brew full, 40-ounce

pots of coffee. The five we recommend are shown on the chart below.

Blade grinders chop the beans with their furiously spinning blades. In a burr grinder on the other hand, beans are truly ground a few at a time between two grooved disks, one stationary and the other rotating above it. The grounds are fed out through a chute into a sealed container. The blade grinders' rough treatment of the beans often results in unevenly ground coffee, with particles ranging from dust to large chunks, but we could improve the evenness of the blade grind either by grinding in short, quick bursts, with stops in between to shake the grinder to redistribute the grounds, or by shaking the grinder as it ground, much as you would a martini in a cocktail shaker.

The burr grinders produced a more even grind, but tasters did not find that more evenly ground coffee translated into improved flavor. Tasters did prefer the rich body of burr-ground coffee, but they also noticed the tendency of this coffee to taste slightly bitter, owing in part to the more fine and even grind, which made for the coffee's greater exposure to the water in the coffee maker. These combined forces caused over-extraction, which occurs when too much flavor is extracted from the beans.

We were surprised to discover that the coffee brewed with blade-ground beans was less likely to turn out bitter. The tasters did note that coffee from blade-ground beans had less body than coffee from burr-ground beans.

User-Friendly Design

Any appliance that you use first thing in the morning, while you are half-asleep, had better be well designed and user-friendly. The two design factors that came to matter to us most were capacity and depth of the

cup (on blade grinders). Any grinder should have a capacity large enough to grind in a single batch the beans necessary for a full pot of coffee. Likewise, the cup should be deep enough to contain the grounds without spilling as you remove them from the grinder.

All of the burr grinders and the Capresso Cool Grind, Krups Fast Touch, Mr. Coffee Coffee Grinder, and Braun Aromatic blade grinders made the cut here. But the blade grinders offered additional advantages. They were easy to clean, often requiring just a careful wipe of the hopper with a damp paper towel, and they were inexpensive, hovering around the \$15 to \$20 mark. Truth be told, we recommend all of the four blade grinders mentioned above. That said, we do have one caveat for espresso drinkers. Most manufacturers advise against using a blade grinder—any blade grinder—to grind coffee for use in a pump-driven espresso machine. These grinders simply cannot grind the coffee fine enough. If this limits your choice to a burr grinder, then we'd go for the Mr. Coffee model because it has a simple on/off switch, which we felt worked better than the timers found on the other two burr models.

The temperature of the coffee was measured three times immediately after grinding with an infrared thermometer (in degrees Fahrenheit). The results were averaged to determine the average temperature increase for that mill. According to coffee industry experts, the lower the temperature increase, the better. **WE**

Excerpted with permission from Cook's Illustrated, November/December, 2001. For a trial issue, call 800/526-8442. Selected articles and recipes, and subscription information, are available online at www.cooksillustrated.com.

RATINGS
★★★ GOOD
★★ FAIR
★ POOR

Brand	Price	Capacity	Design	Cleaning	Temperature increase	Tester's comments
Capresso Cool Grind, Model 501	\$19.95	★★★ 12 Tbs.	★★★	★★	7.5°	Has large capacity and a deep cup, the features we value most in a blade grinder. Some large pieces of bean were left after grinding, however.
Krups Fast-Touch Coffee Mill, Model 203	\$19.99	★★★ 12 Tbs.	★★★	★★	10.6°	No cord wrap, but excellent fit between lid and base. Grinds fine, yet does not create excessive amount of coffee dust.
Mr. Coffee Coffee Grinder, Model IDS55	\$14.99	★★★ 10 Tbs.	★★★	★★	9.6°	Nice deep lid prevents the (unevenly) ground coffee from spilling. No cord wrap.
Braun Aromatic Coffee Grinder, Model KSM 2B	\$19.99	★★ 9 Tbs.	★★★	★★	10°	Tended to grind on the fine side, rarely leaving large chunks of bean. Did create a noticeable quantity of coffee dust, though.
Mr. Coffee Burr Mill, Model BM3	\$29.99	★★★ 36 Tbs.	★★★	★	12.3°	Grinds thoroughly and pretty evenly, but not completely without dust. No automatic timer, which is fine. We like the control offered by a simple on/off toggle.



The Royal Coffee Maker

\$368 plus \$15 shipping and handling
Royal Accoutrements
172 W. Sherwood Road
Okemos, MI 48864
800/546-8394, 517/347-7983
store.yahoo.com/royalcoffeemaker/index

When I attended Reed College in Portland, Oregon in the early 1980s, Reedies made regular pilgrimages to Huber's, a stuffy downtown leather-and-wood bar populated by lawyers entertaining other lawyers. What drew us back time and again was the spectacular display performed by the waiters when making Spanish coffee—it involved flames and pouring liquids from great heights into tiny cups, as well as a beautiful tray upon which this was all performed. It was utterly enchanting, more than worth the four dollars for the cup of coffee.

All these elements are also a part of the display of the "balancing syphon" coffee maker, minus the exotic tuxedoed waiters. The entertainment value here is poetic—the anticipation of the heated water pouring into the glass beaker, the lid of the burner snapping shut as the kettle tilts, extinguishing the flame, the brewed coffee being sucked back through the vacuum tube into the copper kettle. It's all in the visuals. Plus, the coffee is good.

Royal Accoutrements is not pretending at modernity. Their balancing syphon is a reproduction of ones used by the monarchy of nineteenth-century Vienna. It is coffee brewing as performance art, designed to draw a crowd.

The balancing syphon we reviewed is made with copper fittings. It can be purchased with a demitasse serving set, and is also available in silver or gold plate.

—SGS

The Great Coffee Book

Timothy J. Castle and Joan Nielsen
1999; 152 pp. \$15.95
Ten Speed Press

From bean to brew, *The Great Coffee Book* takes you through the making of great coffee: its history and origins, how it's produced and why java/mochas are not all they're reputed to be. If you don't already know the difference between espresso, coretto, and americano, you will by the end of this read. The *Great Coffee Book* offers over thirty coffee recipes—café brûlot, banana coffee bread, and pot roast in coffee gravy among them.

—Cherine Badawi



Stove-top espresso maker. From *The Great Coffee Book*.

"Chocolate Espresso Cookies

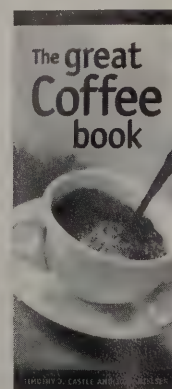
Makes about 4 dozen

- 2 cups flour
- 1/4 cup unsweetened cocoa powder, preferably Dutch process
- 2 tablespoons instant Italian espresso powder
- Pinch salt
- 1 cup (2 sticks) butter
- 1/2 cup sugar
- 2 teaspoons vanilla
- 1 cup chopped pecans
- Powdered sugar for dusting



In a medium bowl, whisk together the flour, cocoa, espresso powder, and salt. In another medium bowl, beat the butter, sugar, and vanilla with an electric mixer set at medium speed until light and fluffy. Add the flour mixture and beat until combined. Stir in the pecans. Cover and place the cookie dough in the refrigerator for 2 hours.

Preheat the oven to 350°. Roll the dough into one-inch balls. Place the balls one inch apart on an ungreased baking sheet, pressing down on them slightly with your fingertips. Bake for 12 to 15 minutes, or until the edges are brown. Let the cookies cool on the baking sheet for 2 to 3 minutes before transferring them to a wire rack. When completely cool, dust them with powdered sugar.



Roast Your Own



Fresh Roast Home Roaster

\$52
Fresh Beans Inc.
427 Industrial Way,
Suite D
Fallbrook, CA 92028
888/757-2326
760/723-2826

The Coffee Project

7095 Hollywood Boulevard #714
Hollywood, CA 90028
800/779-7578, 323/436-2800
www.coffeeproject.com

In Kona, it seems like everyone has some green beans lying around—not enough to take to the commercial roasters, who usually have a forty-pound minimum for running the roaster. Our one or two pounds usually ended up in a cast iron frying pan, or on a baking sheet in the oven, or maybe in an electric popcorn popper. I had heard something about home roasting machines. They sounded far away—people in California probably had those things. Sure enough, that's where I found them.

Historically, coffee was prepared each day from green beans, and roasted for that day's use. This machine's small size is good for accommodating people who feel that this is still the best way to get a good cup of coffee. Roasters are also available in a plethora of other sizes.

The Fresh Roast Home Roaster, at the smallish end of the home roasting machines, is right for those who want to grind and brew just-roasted coffee. It produces 2 1/2 to 3 ounces of roasted coffee at a time—about enough for a couple of pots of coffee (10–12 cups' worth).

The Fresh Roast is essentially a modified hot-air popcorn popper, with an added nifty chamber which collects the chaff from the coffee beans as they roast. It's called a fluid bed roaster, and it incorporates many of the elements—including a cooling cycle

and the chaff filter—that Ken Davids had anticipated when he wrote Home Coffee Roasting in 1996. It is designed to get the beans through the roasting process with the best flavor. It also has a temperature control that you can set, like a toaster, according to how dark you want your roast. In a roaster with a chamber this small, the temperature rises fairly quickly, which means that roasting time is shorter—our dark roast took about five minutes, with another two minutes to cool.

The Coffee Project is the distributor that sent me this neat gadget, along with a copy of Home Coffee Roasting. They sell a nice variety of roasters, offer a great selection of green beans by the pound, and produce a home roasting newsletter called Ground Control. I like The Coffee Project and their way of doing business—they have created a genuine place for discussion about coffee and roasting without a lot of hype. James at The Coffee Project also mentioned that a prospective home roaster could probably buy green beans from any local roastery.

—SGS

Home Coffee Roasting

Kenneth Davids
1996; 216 pp. \$15.95
St. Martin's Griffin

Ken Davids posits that if we are to understand food at its source, then that should naturally extend to coffee—the largest agricultural commodity in the world. If we want to regain control over our food systems, simplifying our relationship to coffee is a fairly easy thing to do, simply by gaining some understanding of the beans and taking control of the last stages of processing. Along the way, you get the bonus that the coffee, like homemade bread, tastes better.

This book is a labor of love. Ken Davids's passion about all things coffee reaches its greatest artistic expression through the roasting of the bean itself. Home Coffee Roasting turns a simple culinary discussion into great reading.

Several chapters are devoted to a fascinating historical analysis of the technology of roasting and of the beans themselves. The book offers mountains of advice about the beans—how best to store them once roast-

ed, bean varieties by origin and growing conditions, and, most important, how to beget their finest qualities by roasting the beans according to their temperament.

Considered the bible of home roasting by enthusiasts, it's an enriching read, even if you never plan to do more than buy an occasional cup at the café.

—SGS

“By mid-twentieth century Americans thought of “coffee” as granulated brown stuff that came from a can rather than the dried seeds of a tree requiring only a few relatively simple procedures to transform it into a beverage. As happened in the twentieth century with so many other foods and manufacturers, the actual facts about coffee's origin (it consisted of vegetable matter that has been dried, roasted, and ground by human beings) were replaced by market-driven substitute facts (coffee is brown granules produced by the complex machinery of an all-knowing corporation).

Of course, at the very moment of victory for brand-name convenience foods (say about 1960), a countermovement set in wherein the individuals who had recently come to be called consumers began turning themselves back into cooks or wine-makers or brewers or bakers. In the world of coffee the return to more authentic foods took the form of the specialty-coffee movement, which advocated a revival of the nineteenth-century practice of selling freshly roasted coffee beans in bulk, and encouraged coffee lovers to take their beans home and grind them themselves.





The Coffee Book Anatomy of an Industry from Crop to the Last Drop

Gregory Dicum and Nina Luttinger
1999; 196 pp. \$14.95
The New Press

Wendell Berry's "In Distrust of Movements" (Food & Water Journal, Fall 1998), poignantly addresses the growing abyss between producers and consumers. "Educated minds, in the modern era, are unlikely to know anything about food and drink, clothing and shelter. In merely taking these things for granted, the modern educated mind reveals itself also to be as superstitious a mind as ever has existed in the world. What could be more superstitious than the idea that money brings forth food?"

The Coffee Book brings into relatively clear focus a global commodity which has for centuries fueled our industriousness (or at the very least, piqued our anxiety). In fact, according to authors Gregory Dicum and Nina Luttinger, "concentrated nourishment coupled with caffeine had the added benefit of inducing heightened acts of savagery during warfare" among Ethiopian mountain tribes where the coffee plant originated.

This concise and information-packed book traces the rise of the bean from medicinal plant to social revolutionary (commingling habitués of different classes in the milieu of the coffeehouse) to its role in the colonization and continuing deforestation of Latin America. Anecdotes and analysis reveal how global corporations and international trade federations have battled to profit at the expense of small coffee farmers and quality. Readers learn about how coffee is farmed, dried, graded, and roasted, as well as about the long chain of brokers and processors that benefit at each step along the way.

In the last chapter, "The Green Bean Scene," the authors show how the coffee bean has become the crucible for activism.
—Dan Imhoff

Uncommon Grounds

Mark Pendergrast
1999; 458 pp. \$18
Basic Books

This is the detailed modern history of coffee, the background reference about the modern industry, and the source book on

the bean in its relatively recent incarnation as a commodity. Mark Pendergrast lays out what a long and repetitive trip the coffee story has been.

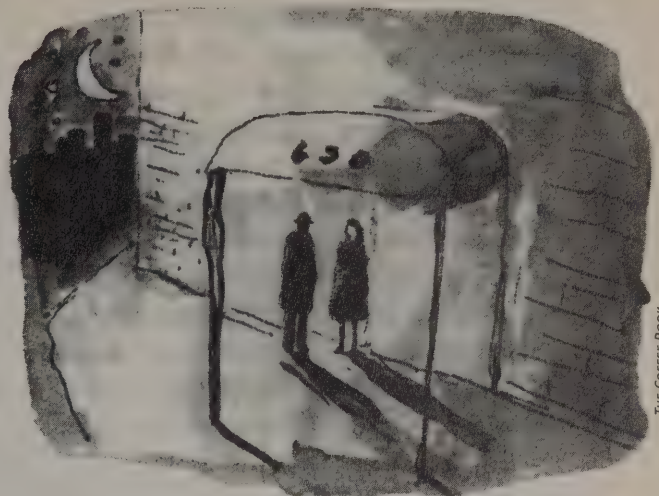
In the 1970s the plight of the Third World coffee farmer was the first wake-up call that modern agribusiness was transforming subsistence farmers into wage slaves. Thirty years ago this problem was first addressed by coffee merchants who wanted to reduce their reliance on corporate infrastructure and conduct coffee trade by decentralizing the industry, thus birthing the specialty coffee movement.

Just as important, this book gives a great overview of how a crop became more than a crop—how marketing transformed a beverage into a rock star and how countries have been kept politically destabilized in order for coffee corporations to maintain control over their cash crop of choice.

—SGS

"After a sleepless night, on the morning of August 24, 1954, Getúlio Vargas [president of Brazil], seventy-one, shot himself through the heart in his bedroom. He left an eloquent, typed suicide note. "After decades of domination and plunder on the part of international and economic and financial groups," he wrote, "I placed myself at the head of a revolution and won." Yet these unnamed international groups had joined his domestic enemies in an attempt to subvert his campaign to create national wealth and autonomy. When he took office in 1951, he wrote, "profits of foreign companies were reaching as much as 500 per cent per annum.... Came the coffee crisis and the value of our main product rose." After this brief respite, however, "we tried to defend the price and the reply was such violent pressure on our economy that we were forced to give in.... There is nothing more to give you except my blood," Vargas concluded. "I have given you my life. Now I offer you my death. I fear nothing. Serenely I take my first step toward eternity and leave life to enter history.

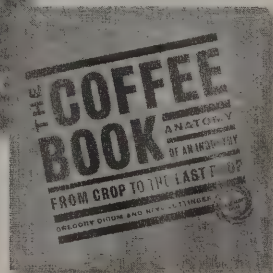
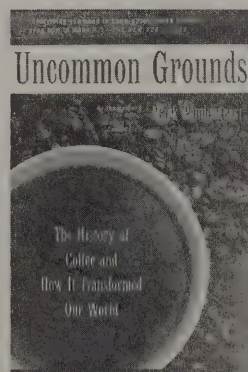
"Coffee prices climbed slowly but steadily after they were finally freed from price control in 1946. By 1947 roasted coffee



THE COFFEE BOOK

"Would you like to come up for some willful exploitation of third world coffee farmers?"

fee retailed for more than 50 cents a pound; yet economists and pundits expected a post-war recession at any minute. "The popularity of the five-cent cup of coffee has made it an established institution that's here to stay," declared one newspaper prophet. The next year, when many restaurants began charging 7 cents, angry patrons broke mugs, stole silverware, and dumped cream and sugar on countertops in protest. Some coffee firms began to advertise that their brand required less grounds to brew a strong cup. One disgruntled coffee man concluded facetiously that if prices continued to rise, "we may yet see coffee so strong you won't have to use any at all to get a delicious aromatic, flavorful cup."



The Poetry of Stimulants



Coffee House in Colonial America, by Alfred Bobbett.

Pharmako/Dynamis Stimulating Plants, Potions and Herbcraft: *Excitantia* and *Empathogenica*

Dale Pendell
2002; 279 pp. \$19.95
Mercury House

We're grateful to Dale Pendell and Mercury House for permission to transmute sections of this book into articles on the history and pharmacology of coffee (see pages 7 and 32). But be warned that the lovely, linear articles created by our editorial alchemists don't completely convey the richness and complexity of *Pharmako/Dynamis*.

This book is the second in Dale's trilogy on "poisons," following *Pharmako/Poeia* in 1995 (the third volume, *Pharmako/Gnosis* is tentatively scheduled for 2003). It is a study of stimulants: coffee, tea, chocolate, cola, amphetamines, coca. It's also a meditation on time, speed, reason, dreaming, and parallels between book-burners and anti-drug warriors. Among other things.

The book is a melange of logical exposition, poetic irruptions, and travel on a road with many detours and roadside attractions. Writes Dale, "The promiscuous mixing of 'hard' science with poetry, and, even worse, the 'occult,' is sufficiently repellent to true believers of both camps to keep them at a safe distance....I call this technique 'autocryptosis.' It seems only fitting that a book about poisons ought to be poison itself." Dale reminds us that "the pharmakon

is both remedy and poison: a baneful drug or a medicinal restorative....It also means 'charm' or 'spell.'" So too *Pharmako/Dynamis*.

—MKS

"The aristocracy was both the first to own clocks and the first to drink coffee. The burgher class followed between 1650 and 1700, taking to both with enthusiasm....

Speed is the essence of modernity.

It is our principal and ruling poison.

Stimulants were the perfect drugs for capitalism.

"Chewing coca leaf is an acquired skill requiring some experimentation and practice to perfect. First off, of course, the leaves are not actually chewed any more than is "chaw" tobacco. Mastication is employed to soften and form the leaf mass into a quid that is then kept in the cheeks.

Coqueros...carry their supply of coca leaves in a woven bag called a *vicuña* or *chuspa*. Along with the bag there is some other container, often a gourd, to hold the lime paste. A stick is dipped into the lime, and then transferred to the quid with a deft twirl....

Coqueros don't add lime to their quids if they are sitting still. Without lime, the effects are to increase alertness, but without physical restlessness. Lime is saved for physical activities. By adjusting the balance between leaf, lime, saliva, and air, the skilled *coquero* can derive a spectrum of effects, and select the one appropriate to his particular situation and state of mind and body.

"Some plants are gregarious, others jealous. Tobacco gets along with everyone, excepting maybe Methodists. Wine and opium can't even attend the same party. Tea visits the poppy's house, but not that of the grape. Coffee seems to be imperialistic: thou shalt have no other stimulants before me, while khat doesn't mind coffee at the table at all.



Künstlerkneipe Voltaire
Allabendlich mit Ausnahme von Freitagen
Musik-Vorträge und Rezitationen
Eröffnung Samstag den 3. Februar
im Saale der „Moleen“ Spiegelgasse 1

Above: Poster by Marcel Slodki for the opening in Zurich of Cafe Voltaire (the birthplace of Dada). Voltaire, one of history's most famous coffee drinkers, is supposed to have drunk seventy-two cups a day.



HUMAN FLOW GLOBAL MIGRATIONS

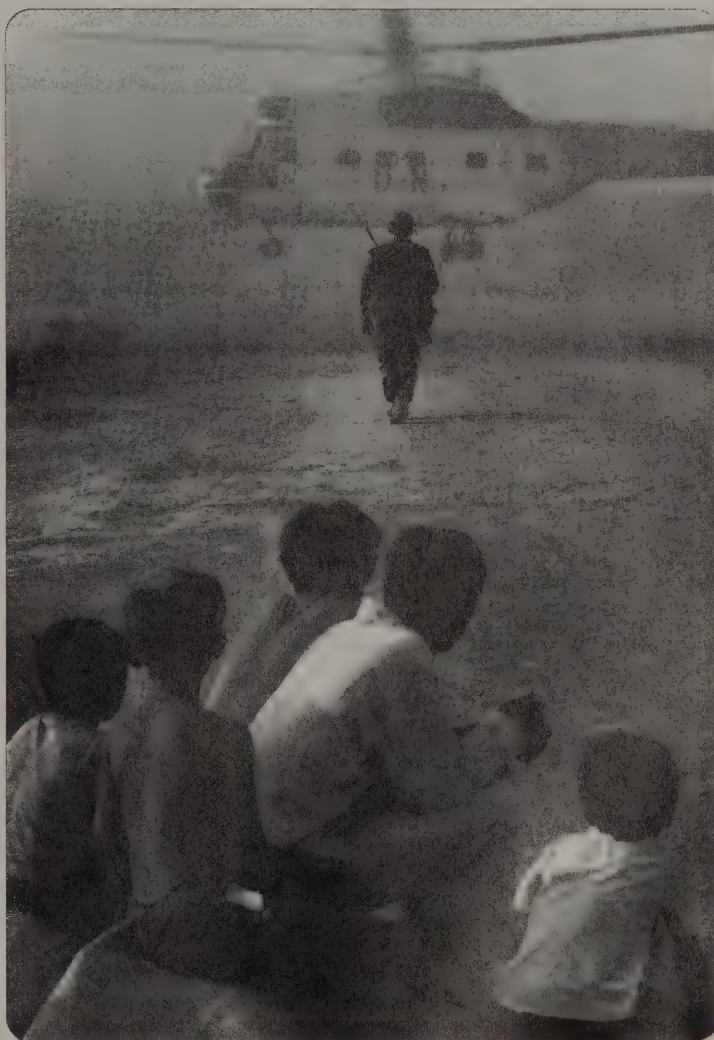


The movements of in-the-flesh humans have gone transnational. We move farther, faster, easier, and more frequently than ever before. "Place" and "home" have become tentative and insecure.

In the fast lane, tourists, visitors, students, business jet-setters, roaming yuppies, and the new demographic (myself at the moment)—"professional transients"—skitter and scatter around the globe, a pin-ball machine of short-term migrants setting off buzzers and lights in all the ports of entry.

These global travelers join transnationals whose migration is still joyous, but not so free-choice or speedy: returnees from wars, repatriated refugees, brain-drain migrants, and family members reuniting with already migrated relatives. In 2000, for instance, over 600,000 refugees voluntarily returned home. In the wealthy worlds, "astronauts" from Hong Kong "parachute" their families into Canada for education, then commute back to Hong Kong for business. In the 1980s, 83,000 Japanese citizens worked overseas for Japanese business companies; 29,000 had residential permits in foreign nations in science labs (not including students!). In the US, foreign computer science students bargain with Microsoft: lower start-up salaries for help obtaining the sacred "green card." In South Africa, a university president has drained the brains from Ghanaian and Nigerian universities in order to Africanize his staff.

These human transnationals, in turn, join the flow of less joyous, but equally determined, illegal and legal job seekers—overseas contract workers, mail-order brides, *mojados* buying forged green cards, the clandestine who work for low-pay employers and sleep in eight-to-fifteen-person apartments.



A UN helicopter arrives at Otaki reception center for returning refugees, Battambang Province, Cambodia.

FROM *THE STATE OF THE WORLD'S REFUGEES* (SEE REVIEW, PAGE 44)



Mass return of refugees from Tanzania to Rwanda, December 1996.

THE STATE OF THE WORLD'S REFUGEES

No one knows how many job-seeking transnationals dwell in lands other than their own. One estimate says about 100 million, not counting those fleeing violence.

There is a plethora of stories. A Polish worker may find work in Germany with an employer who prefers Poles (they are nonunion). Turks slide past borders to Germany and accept even lower wages, pushing the Poles back to Poland. Mixtec Indians by the thousands circulate between Oaxaca and the fog-belt farms of California. My nephew tried to organize these farmworkers, only to discover that they did not speak Spanish and he spoke no Mixtec.

A smart (she spoke five languages) and charming Filipina at the American Bar in Dakar (Senegal) told me she was living on a five-year overseas contract to drink and dance with Asian fishermen when their trawlers docked in Dakar. My sister met an intellectual Russian refugee, given asylum in Israel, who argued it was beneath his status to do construction—so the Israeli company who offered him work imported Thai and Romanian workers who had no Israeli settlement rights.

STUNNED AND IN JEOPARDY

The most miserable, stunned, and in-jeopardy transnationals are those forced into flight by violence. In 2000, over 14.5 million humans could not or believed they should not return home because of threats of impending persecution or death. (The refugee numbers varied from 13 to 17 million in the nineties.) Over 77,000 sanctuary seekers were expelled from host nations, forced to reenter “home nations” still steeped in bloodshed. In 1971, ten million fled Bangladesh into India in less than a year. In 1994, 250,000 left Rwanda for Tanzania in one day!

These 14 million or so “official refugees” meet the criteria set out in the 1951 Geneva Convention. Now add over 20 million humans who have been internally displaced—known in the refugee business as IDPs (internally displaced persons). Because they remain inside the world’s accepted national boundaries, they cannot be legally counted or treated as transnational refugees. Yet many are virtually “transnational” because many post-colonial borders are whimsical and contested. Only recently, in places like Kosovo, Somalia, Burundi, and Haiti,

has the international community been willing to defy national borders and militarily enter a sovereign state to provide humanitarian support, prevent out-migration, and provide safe zones for civilians.

More than thirty nations have over 100,000 IDPs each. Sudan sadly leads the pack with four million. Angola, in 2000, harbored somewhere between one million and four million; Colombia over two million; and Congo-Kinshasa close to two million. Add the “ecological” IDPs—the uncounted numbers of people homeless by natural disasters (earthquakes, floods, volcanic eruptions). And add another 10 million “oustees” who lose their homes each year from “development” projects—dams, roads, shantytown upgrading.

The extreme IDP is the “permanent stateless nonperson,” a person who has no nation. Millions of Kurds, for instance, promised a homeland that never happened, move between five nations that might equally be considered parts of their nation. They are neither refugees nor citizens.

Today, one out of every forty or fifty persons on Earth dwells in a nation-state away from his or her birth state. They ask themselves and their governors: Where is home? where my body is? where my heart dwells? where I own property? have the closest kin? work? vote? have the deepest feelings for a motherland or fatherland? What’s “home” to one who works afar and never sees the family he/she keeps alive? or dwells in many places in a lifetime of job junkets? or dwells in a spiritual “no place,” be it the “same” office in a half-dozen nations or in the deadly quiet of a refugee tent city?

HOMO MOBILIS TRÉS MODERNE

One could argue that we have always been *Homo mobilis*, that, given the small percentage of the world population on the move at any one moment, the current flows are nothing new. But that is too easy. Here are a few editor-at-large observations

about what makes our time unique:

- In earlier migrations, the men went first and then sent for the women. Now, many women are independently on the move (see page 42). More and more women work outside their nations of birth, work for wealthier women in upwardly mobile places like Hong Kong, Saudi Arabia, and Singapore. Transnational maids and child-carers spur a growth market unique to female transnationals.

- Foreign policy of the past considered mass human transits as aberrations that social engineering would solve. "Durable solutions" to "root causes" have been the shibboleths of the elite. "Raise the average income in a source nation to over \$4,000 and the migration will stop." "Open free trade and local wealth and jobs will squelch the desire to migrate." "Convince the private sector to invest in nations about to burst their seams." "Send aid and restructure."

But all these well intentioned acts have had the opposite impact. Once two or more nations network, then people, like cash, flow faster and more exuberantly through the migratory cracks. NAFTA has not slowed undocumented workers. The poor and displaced know better. Get to where the money is and—out of love for family—send a portion back home. The present scale of these remittances is unique in human history (see below).

- Once you globalize seductive media images, you globalize human hope, determination, and out-migration. When countries globalize the exotic and the gorgeous to attract tourists, transnational flows increase. When visions of the "good life" of the wealthy nations are telecommunicated, job-seeking and asylum shopping globalize. Today, the tension between media dream and reality is intense.

- In older colonial-based migrations, people flowed predominantly north to south and back. Now, with the end of the Soviet Union and the opening of China, migrations are equally east to west. Even a small exodus from China (with 100 million

"surplus" farm workers) will soon change the culture and politics of the receiving nations.

- In earlier civil wars, other nations usually stayed away. Now, to prevent the outflux of refugees, the UN and regional armies defy the rights of nations to resolve their own "internal" issues, and—when they deem the government of the country at war irresponsible or unable to respond—intervene to contain and give safe haven to civilians. Costs of helping displaced persons have skyrocketed, but are still lower than the political costs of giving sanctuary to the uprooted and rootless.

- So many humans want a better life or have nothing to lose that the business of human trafficking flourishes. Full of cat-and-mouse strategies, legal and illegal ruses, greed-filled syndicates, forgers, passport thieves, deceit, risk, and danger, the industry has made the task of migration easier for more people. Profiteering smugglers continue to outsmart governments.

- Dispersed networks of humans with similar languages, origins, and ethnic worldviews increasingly organize the flows of humans and their family patterns of life. The Jewish diaspora set the long-term standard. The Mafia set another. Today, the best predictor of who will migrate, and where, is not poverty or even war, but the power of transnational social webs (see reviews on page 46).

REMIT AND PROSPER

Here's an astounding fact: Cash flows generated by transnational workers generate more cross-border trade and financial transactions except oil. These "remittances" stabilize and enhance the incomes of more poor families than any humanitarian endeavor dreamed up by economists, politicians, or philanthropists.

Remittances from the 4.3 million overseas Filipinos and Filipinas, for instance, defray fifty percent of the Philippine trade deficit. In 1981, out-

of-nation Pakistanis remitted \$2 billion, which equaled thirty percent of the value of the nation's imports. In the same year, one-third of all incoming cash to Morocco, Tunisia, and Algeria was money sent home from France. In 1991, Jordan received the equivalent of 40 percent of its foreign debt from out-of-country workers. Over 16 billion dollars in remittances annually moves south to Latin America from the US.

The \$70–75 billion in multinational remittances from transnational workers (all these numbers are guesstimates) might encourage the World Bank and IMF to consider the Philippine approach: make babies, promote family love and responsibility, export youth regardless of gender, reduce in-nation unemployment, import cash to raise family incomes, and substantially balance the trade deficit.

Maybe it's time for both the globalists and anti-globalists to consider what the poorer and disenfranchised have already worked out. Maybe it's time to accept remittances as perhaps the most efficient form of "trade" and "aid" to the poor; time to regularize guestworkers, just as the WTO tries to regularize commodity trade, and offer bank accounts to foreign workers. (Bank accounts keep interest earnings in the host nation, and allow more information about migrant movements.)

Living in Tucson, with many illegal acquaintances, I see the humane goals as reducing deportation fears and encouraging governments to out-compete the underground human trafficking industries. Spending billions trying to stop the flow will occasionally work. It is time to develop private/public sector partnerships that allow guest workers to work in the open, but not undermine the jobs of residents. Australia leads in this understanding with a social valve of allowable migrant flows to satisfy employers, strong union monitoring, employer levies/taxes to minimize distortions in salaries from cheap

foreign workers, incentives to encourage returns during economic down cycles, and more sympathetic treatment of illegals and their desire to stay united with their families.

In general, comparable rules for professional transients and for blue-collar, domestic, and farm workers are a precondition to a sustainable commerce. One set of rules for the professionals and another for the laborers can only breed discontent and a black market in migrant worker "trade."

MOVING WOMEN

Except for the sad situations surrounding mail-order brides and the ugly trafficking in daughters sold into prostitution, women increasingly make their own migration decisions. The majority of migrants from Cape Verde to Italy; from Philippines to the Middle East; and from Thailand to Japan are now women.

Annie Phizacklea at Warwick University in England interviewed numerous women who chose to migrate. Here is an Indonesian woman who has been away thirteen years, including twenty-four months in London, supporting two children back "home":

My husband was a truck driver and a womanizer. He contributed little to the family, and I decided I'd be better off on my own; if I went to work abroad I could support my children. My mother-in-law and cousins lived close by. My mother-in-law was prepared to take responsibility for the care of the children....

Having made up my mind to leave I went to an employment agency which was used by many others to find work in the Gulf. I financed the trip myself. I had to pay 500,000 rupees to arrange the job, and I sold my sewing machine to raise the money. My youngest child was only six months when I left for Saudi Arabia....My main reason for leaving to work abroad was finan-

cial....but I also knew I was better off alone, so the decision was for me as well as the children....

I went to work for a prince in Saudi Arabia and I looked after the children from birth. It hurt me so much that as they grew up they showed me no respect; they even spat at me.

In another interview, Annie Phizacklea asks a woman who had a child and was married before she migrated to describe her life:

My mother was happy to look after my son. I came to the UK with my employers. After four years I had to leave because I was pregnant. I live with my partner and my [new] son. I feel at home here but I also feel at home in the Philippines, I just don't know how I'll feel when I go back. We want to get married but we don't have divorce in the Philippines so I'm still married to a Filipino. When I get my papers I want to visit my family straightaway, I miss my son so much. But what do I do? I would really like to bring my son back, but he regards my mother as his mother now, how would he adjust? I want him to be with his little brother. I send money home twice a year for my son's education, I phone every two weeks and write once a month....I feel much more confident now. I have lots of English friends we met through playgroup and babysitting circles.

Tens of thousands of transnational bio-moms have become virtual mothers. Other members of the family bring up their children, while they financially support the children from afar. For the mother-displaced (and father-displaced), the fracturing of home, love, and parenting is intense. The laws preventing families from reuniting or even visiting go to the heart of the present dilemma: Financial security, skills enhancement, and child support can

best be accomplished by migrating, but the sacrifice creates a painful schism between place and family life. For instance, foreign housemaids in Singapore who attempt to settle their families or marry are promptly expelled.

FLIGHTS THAT SHOULD BE STOPPED

Afghanistan, Liberia, Sudan, Yugoslavia, Somalia, the former Soviet Union, Myanmar, Nicaragua, Ethiopia, Chad, Angola, Mozambique, El Salvador, Haiti....If one can speak to the moral heart of the world, those violently forced to flight may be the most accurate signal of planetary human cruelty or kindness. The signals have not been salutary, as the number of small wars has continued to increase since the 1960s, and the percentage of civilians killed has risen from about 50 percent in the 1950s to near 90 percent in the 1990s. More children (especially fourteen-year-olds carrying light weapons) than adult soldiers die in postmodern conflicts. And land mines continue the violence even after the bullets stop. The "rules of war" have disintegrated.

I wish I could write so that readers' hearts would tear open from the blank stares, the stunned confusion of homelessness, and the reduction to living for just this day and then the next. Since my time in Ethiopian hunger camps, I have been unable to compose those scenes. With some admitted cowardice, I have come to rely on stats and information to conjure a vision that might end the pain of forced global itineritis.

Pondering all the causes of the violence and human flux (see chart), irresponsible sovereignty and inappropriate design of governance hover most in my mind. In Africa, the largest tribe wins the vote, exploits the nation, and festers rebels. How majority governments can balance single-ethnic group voting with acceptable and fair participation of other ethnic groups has not been discovered. In Ethiopia (before it subdivided), there were over forty mutually

ROOT CAUSES OF HUMAN MOVEMENTS

EXAMPLES

Governance (inability to organize a government form that gives acceptable and fair representation to all constituencies and a peaceful method for the transition of leadership) and armed conflicts

Forced migration and internal displacement. Afghanistan, Liberia, Sudan, Yugoslavia, Somalia, former Soviet Union, Myanmar, Nicaragua, Ethiopia, Chad, Angola, Mozambique

Border conflicts

Changing borders (Eritrea/Ethiopia, former Soviet Union, Yugoslavia, Tibet), contested borders (Ethiopia/Somalia, Azerbaijan) and no borders (Kurdistan)

Ethnic, caste, clan, and religious strife

Usually compounded conflicts over land and water (Palestine/Israel; Rwanda; Lebanon; Somalia; Afghanistan, Nepalese in Bhutan)

Famine and other natural disasters

Sahelian and Haitian famines, Bangladeshi and Central American floods; Afghan earthquakes

Restructuring/free trade and the rural/urban migration launch pad

Global economic conditionalities and rural-to-urban-migrant flows (China, Latin America, Africa)

Development infrastructure and forced population transfers ("oustees")

Forced migrations from power plants (Chernobyl), dam building (Three Gorges), roads, industry (Kola Peninsula), and shantytown clearance; Indonesian transmigration

Higher incomes and remittances

Cross-border job seeking (from Jordan, Philippines, Egypt, Mexico, Bangladesh, Turkey, Morocco, Pakistan, etc.) and professional transients

Persecution

Threats of imprisonment or death. Kurds, Cubans, Chinese, Tibetans, Sierra Leonens

Light weapons trade and landmines

Postponed or prevented repatriation (Myanmar, Afghanistan)


distinct languages in an area the size of Texas. Even small numbers of migrants have upset the industrialized democracies.

The US, the world's present powerhouse, has neither the history nor the wisdom to design and transfer a form of democracy that can insure peaceful transitions of leadership. Native American genocide, African slavery and African-American segregation leave the US ill-prepared. Postcolonialist Europe is not much more competent. It took from the fourteenth to the nineteenth century for Europeans to achieve peaceful sovereignties with peaceful transitions of power. Though no new nation has had time for a Hundred Years War, Europeans know from their history that such a war is possible. Sudan is still in the midst of its Thirty Years War. (Europeans may also remember that the Black Death has its analogy in AIDs.)

In short, halting the production of refugees and the internally displaced requires an imagination that does not yet exist. Ethiopia tried a council of elders to balance majority tribal rule. Nelson Mandela thought deeply about the subject, but could not stop refugee manipulation and production in Rwanda/Burundi. The UN Security Council has decided that it can violate the sovereignty of independent nations, and its "peacekeepers" can militarily intervene to prevent extreme civilian casualties, death by disease and starvation, and the eruption of cross-border flight. The UN has even decided to remain after conflicts to try to help establish a working government with a just police and court system. But the moral calculus—defining the criteria for "just" interventions—has not yet been devised.

The flows of humans remain channeled by ad hoc decisions; some

(as in Haiti or Rwanda) have been tainted by the West's "fear of brown bodies"; others determined by more reasoned considerations such as the "impossibility of accomplishing anything," the expected casualties from intervention, and the strategic importance of the irresponsible nation.

Some human flows are profitable, even joyous and spiritually satisfying; others include the bleakest human suffering on the Earth. Like a radar image of hummingbirds crossing the sea, it is a picture of wonder as we grasp for a moment the desire of our species for travel and its determination in flight. How the hundreds of millions moving about each decade will irreversibly change cultures and natures is a mystery. But, to the many-places professionals and the desperate boat people, "home" has become a safe place in the mind, more than a white-walled condo or tattered tent on a plot of the planet. 

Best Sources for Refugee News and Thinking

World Refugee Survey 2002

US Committee for Refugees [USCR]
2002; 309 pp. \$25
1717 Massachusetts Avenue NW, Suite 200
Washington DC 20036
202/347-3507, www.refugees.org

The State of the World's Refugees

United Nations High Commissioner for Refugees [UNHCR]
2000; 340 pp. \$21.95
Oxford University Press

These are the best sources for refugee news and thinking. For forty-two years, the US Committee for Refugees has been the heart and voice of refugees, asylum seekers, and displaced persons. If you want one annual kicker to jar your incredible comfort in America, read USCR's World Refugee Survey. Each survey glows with data galore, practical humble understandings of what's possible, stories of successful interventions to save lives, and lessons learned from stark failures. You close each issue respectful of the astounding ability of humans to persevere in fickle and cruel contemporary messes and of a few humans who spend their lives helping them. Great directory of organizations with well-written access.

The UNHCR tries to care for 22 million uprooted in over 120 nations. Its 2000 edition is the best introduction to UNHCR's half-century of humanitarian action. UNHCR must be diplomatic: balancing

host nation concerns for the swarms of refugees with refugee warriors causing the forced migrations; pleading with rich nations for donations of food and finances; lobbying the Security Council for peacekeepers; and attempting to protect human rights in nations that could care less. For these reasons, The State of the World's Refugees's reports lack the candor of the more independent USCR, but this higher-production pub has the better graphics, maps, and photos, as well as snap-shot portraits of the world's refugee hot-spots.

—PW

“When UNHCR was founded in 1950, the European refugees on which it focused its efforts were mainly people fleeing actual or feared persecution from totalitarian governments—people displaced by facism and those seeking to escape Stalinism. Political repression and massive human rights violations are still significant elements in today's displacements. But for the majority of today's refugees, armed conflict—which often involves persecution and other human rights abuses against civilians—is the major source of threat. Many of the armed conflicts of the post-Cold War period have proved particularly dangerous for civilians, as shown by the scale of displacement and the high ratio of civilian to military casualties—more than 9:1 in some cases.

—THE STATE OF THE WORLD'S REFUGEES

The Age of Migration International Population Movements in the Modern World

Stephen Castles and Mark J. Miller
1998 (2nd ed.); 336 pp. \$28
Guilford Press

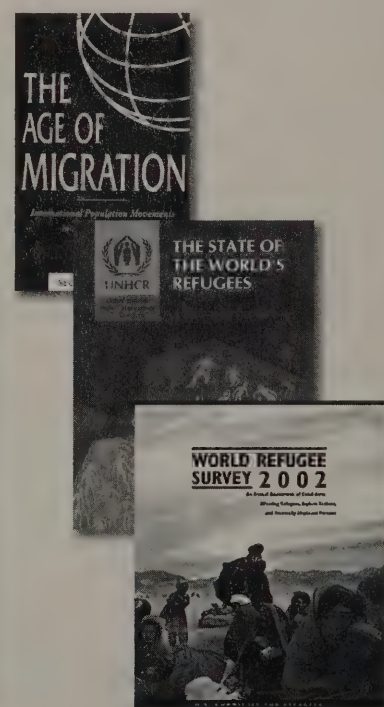
The crucial and best narrative of all kinds of movement, not just refugees.

—PW

“At the beginning of the Gulf Crisis in 1990, there were 1.1 million foreigners in Iraq of whom 900,000 were Egyptians and 100,000 Sudanese. Kuwait had 1.5 million foreigners: two-thirds of the total population. The main countries of origin were Jordan/Palestine (510,000 people), Egypt (215,000), India (172,000), Sri Lanka (100,000), Pakistan (90,000) and Bangladesh (75,000)....The Iraqi occupation of Kuwait and subsequent war led to mass departures of foreign workers...perhaps one million Yemenis were forced out of Saudi Arabia when their government sided with Iraq....The new influx of Palestinian refugees threatened to compound Jordan's severe economic and political difficulties.

REFUGEES [IN 2000]	INTERNALLY DISPLACED	TOP 10 DONOR COUNTRIES TO REFUGEE AID AGENCIES, 2000 US Dollars Per Capita
Palestinians4,000,000	Sudan4,000,000	1. Norway12.55
Afghanistan3,600,000	Angola1,100,000-3,800,000	2. Denmark9.36
Sudan460,000	Colombia2,100,000	3. Sweden7.19
Iraq450,000	Congo-Kinshasha .1,800,000	4. Switzerland5.81
Burundi420,000	Burma600,000-1,000,000	5. Netherlands5.10
Angola400,000	Sierra Leone500,000-1,000,000	6. Luxembourg2.81
Sierra Leone400,000	Turkey400,000-1,000,000	7. Finland2.81
Burma380,000	Indonesia750,000-850,000	8. Belgium1.49
Somalia370,000	Iraq700,000...	9. US1.40
Congo-Kinshasha .350,000		10. Canada1.21
Eritrea350,000		
Croatia315,000		
Vietnam300,000...		

From World Refugee Survey



ERASING BORDERS

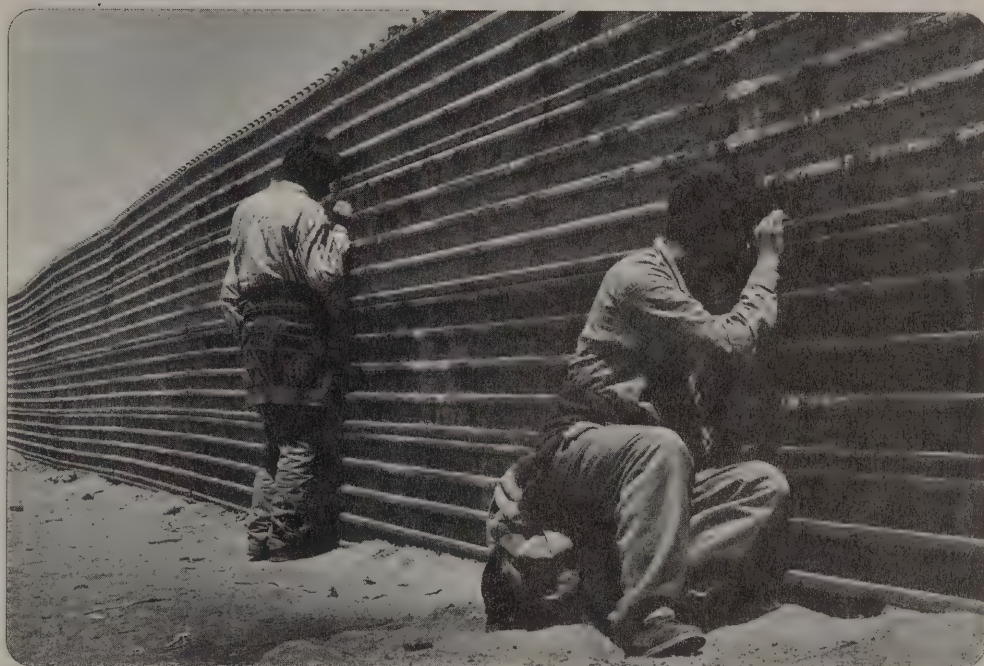
HUMAN FLOW ON TURTLE ISLAND

Migration. The simple matter of people moving from one place to another, maybe moves from one bioregion to another, or shifts of living place within the same region. In the old days sometimes peaceful, even harmless.

But immigration: now that's political! It means you're crossing the boundaries of this or that nation-state, with the hope of staying. Any discussion of immigration must by definition assume the nation-state system, with the socio-political mindset that usually ignores the non-human communities and ecological boundaries of the "country."

There are those who argue that since the majority of the North American population is descended from immigrants it would be somehow wrong to change past policies, and to try to slow immigration down or even bring it to a halt. This backward-looking position fails to see that, although people do move to new places, they can be expected in time to become members of that place, and to think in terms of the welfare of the place itself. People who have moved do not remain immigrants, with "old country" nostalgia, forever—and when our loyalties are to the land we live on, the debate changes.

The liberal thinkers who defend further immigration into the United States in the name of compassion, tolerance, and diversity—or even in the name of the economy—might often be the same people who sympathize with the injustices that Native Americans suffered through the last half-millennium on account of us reckless newcomers. They might also count themselves as environmental-



FROM *MIGRATIONS*, BY SEBASTIÃO SALGADO (SEE REVIEW, PAGE 48).

ists. We need to look at how the question of immigration fits with an environmental conscience, and the call for ecological as well as social justice.

The key idea is "carrying capacity." Seeing as how a big non-Native-American population is actually here—we must put ourselves to the question of how all of us can live together, without endless guilt, and with ecological wisdom for the long run. So it's time for Americans to grow up and *be* here. Once having done so, they will be competent to consider the essential questions of both carrying capacity and economic sustainability. "Carrying capacity" is a working concept that tries to understand where the limits to growth of a given species in a given region might be, in terms of allowing the other inhabitants to also flourish. Looking at the

By Gary Snyder

needs of diverse forests and soils, and the cycles of water and air, the evidence suggests that North America, the planet also, is already overpopulated by humans. Some will say all that we need to do is consume fewer resources per capita and distribute the wealth, and then a smaller population won't be necessary. That might in some senses be true. But what the heck, why not slow down human population in any case, and truly leave space for the other critters. The criteria for human carrying capacity must include genuine diversity of species and their needed large wild habitat—not just as tokenism. Quality over quantity.

But still, new immigrants might

The United States has built steel barriers along some stretches of its border with Mexico. Here two migrants in Tijuana look into the US through cracks in the steel fence. The political border marked by the fence pays no heed to the ecoregions that traverse it.

sometimes be welcomed. So the same kind thinking must be extended to them: that they not just "share in the American Dream" but share in the challenge of living wisely for the long run on Turtle Island.

The question of immigrants from Mexico into the States is richly complex. Remember the Treaty of Guadalupe Hidalgo? It promised the Californios and the Indians that they would retain title to all their lands. A good half of Upper California was shaped by Hispanic culture for over two centuries. The Mexican people, our North American brothers and sisters, carry a big percentage of Native American blood. They are an old vernacular population with a powerful culture. They push north because of poverty. There must be other ways to approach this problem than to lock the gate. One challenge, if we wish to slow down the flow of people looking for better lives, is to work on the question of the Mexican economy, to look for ways to help make life within Mexico less bleak. NAFTA is obviously no answer.

Expose American corporations that corrupt Mexican workers. Help Mexico transform! USA and Mexico might someday be true partners—what a wonderful idea.

Or more radical yet, the bioregional approach, that we would declare the boundaries between the US and Mexico, the US and Canada, null and void. Natural regions, and their capacities, would be the touchstone. A bunch of gringos could move south if they had the will to learn. Let the Chicanos who want to, move north and give their work and loyalty to the Cascades or the Great Basin. (The Arctic Inuit already have a hemi-circumpolar nation of their own.) All of us will cut down population growth, white and brown alike, and then learn our ecosystems together—from Panama north—in Spanish, English, and maybe Navajo and Lakota. Multiracial patriots/matriots of Turtle Island. Fidel will get the Pope to change his mind on birth control. (Dream on...)

And offshore immigrants—new ones from Asia, Africa, Europe, if

and when allowed, will be called on to learn not just US history and the Constitution, but the landscapes, watersheds, plants and animals, of their new home. Maybe someday that would include long walks in the desert, or meditations by Appalachian waterfalls, as part of their initiation into the work of the new world. Each person will come back out of the sweat, purified, reborn, no longer an immigrant, but a person whose work and heart are here in North America.

But of course, first, we must do this for ourselves. We all need to become people who are responsible to the land, and only then we can ask as much of anyone else who might hope to live here. Migration. The simple matter of people moving from one place to another, maybe moves from one bioregion to another, or shifts of living place within the same region. In the old days sometimes peaceful, even harmless. **we**

Pulitzer Prize-winning poet and ecoregional guiding spirit Gary Snyder is a member of *Whole Earth's* editorial board.

BOOKS

Books on Diasporas

The Great Human Diasporas The History of Diversity and Evolution

Luigi Luca Cavalli-Sforza and
Francesco Cavalli-Sforza
1996; 300 pp. \$14
Perseus

Basque may be the remnant language of the Cro-Magnon (who lived 30,000 to 40,000 years ago), which evolved into Caucasian, Sino-Tibetan and Na-Dene (Apache, Navajo, and Athabaskan) languages. That and other cool facts make this a fun page-turner. If you are a not so youngard, like me, this is a breezy catch-up on recent work in the quest for mitochondrial Eve and y-chromosome Adam. Father and son Cavalli-Sforza go for the



The arrival of Gypsies in Europe. From *The Penguin Atlas of Diasporas* (reviewed on page 47).

popular questions: How different are we from hominoids and apes? Why are we different? What is cultural legacy and what is genetic? Race and racism? Evolution and progress? The world's the stage, the arias start 100,000 years ago, and the sapiens songs veer and steer to Verdi.

—PW

“This superfamily, called Dene-Caucasian, was probably used throughout Eurasia before either Nostratic, or Eurasiatic, spread. The most compact families in geographic terms are those used by peoples that have spread more recently. There are several examples of ancient families or sub-families being splintered and partially overlain by other groups expanding into the older language's territory. In this case, the Dene-Caucasian superfamily should be the oldest of all and date back more than thirty thousand years, if, as indeed seems very likely, Basque descends from the language spoken by the first modern humans to come to Europe, the Cro-Magnon.

The Penguin Atlas of Diasporas

Gérard Chaliand and Jean-Pierre Rageau
1997; 182 pp. \$22.95
Penguin

Global Diasporas An Introduction

Robin Cohen
1997; 228 pp. \$19.95
University of Washington Press

New Diasporas The Mass Exodus, Dispersal, and Regrouping of Migrant Communities

Nicholas Van Hear
1998; 298 pp. \$22
University of Washington Press

Diaspora, in which a religious or ethnic group continues—in the face of forced dispersion—to cherish its collective memory (myths, celebrations, foods, texts), and works hard to keep a sense of identity, has become a great modern strategy for success and survival. The Jewish diaspora from Egypt (13th century BCE) forged the strategy, now modified and studied by other diasporic peoples like the Tibetans.

Penguin has produced an amazing atlas on victim diasporas. Almost 40 percent of the book covers the Jewish diaspora, as

communities rise and fall from China to Yemen to Transvaal. Shorter histories of Gypsy, “black,” Armenian, Chinese, Indian, Irish, Greek, Lebanese, Palestinian, Vietnamese, and Korean pulses of scattering and networking follow. A great place to start to visualize how truly human internets emerge.

Global Diasporas lays out these diasporas in more detail, but with no maps! Cohen also describes diasporas in pursuit of work or trade (Chinese, Lebanese, Indian) and the cultural diaspora of the Carib Islanders—diasporas without as much persecution.)

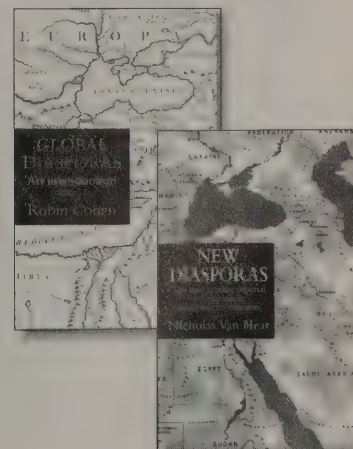
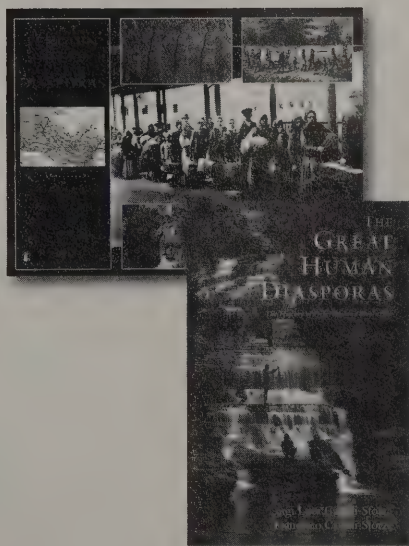
My intellectual favorite of these three is New Diasporas, in which humans move and regroup and disperse and coalesce both virtually and geographically. Finely detailed examples: Asians from Uganda to the UK; Palestinians from Kuwait; Yemenis from Saudi Arabia; ethnic Turks from Bulgaria to Turkey and back to Bulgaria; Albanians to Greece and Italy and back; Mexicans to-and-from the US; Nepalese from Bhutan; and Rohingyas from Burma. At times the book is overly laden with abstractions, but having squatted in refugee camps and watched Los Federales hunt down wetbacks, I felt it to be well anchored. It changed my way of telling stories about what's happening globally now.

—PW

“In all, Jordan may have received more than a million people uprooted from Kuwait, Iraq and other states...in the wake of the Gulf crisis of 1990-91. Perhaps half of the estimated 865,000 third country nationals passing through Jordan were Egyptians; others were migrants from Yemen, India, Bangladesh, Pakistan, Sri Lanka, the Philippines and Sudan. Most of these “third country” migrants were repatriated within weeks to their homelands...Jordan was nevertheless obliged to accommodate in the longer term some 300,000 Palestinian holders of its passports as involuntary “returnees.” This held profound consequences for a small country already encountering serious economic problems.

—NEW DIASPORAS

“Normally, diasporas exhibit several of the following features: (1) dispersal from an original homeland, often traumatically; (2) ...expansion from the homeland in search of work...trade...or to further colonial ambitions; (3) a collective memory and myth about the homeland; (4) an idealization of the supposed ancestral home; (5) a return movement; (6) a strong ethnic group consciousness sustained over a long time; (7) a troubled relationship with host societies; (8) a sense of solidarity with co-ethnic members in other countries; and (9) the possibility of a distinctive creative, enriching life in tolerant host countries. —GLOBAL DIASPORAS



Exquisitely Beautiful, Emotionally Devastating

Migrations

Sebastião Salgado
2000; 431 pp. \$100
Aperture

The Children

Sebastião Salgado
2000; 111 pp. \$45
Aperture

Photographer Sebastião Salgado not only looks head-on at social devastation, but humanizes it, contextualizes it by large and powerful long views, and creates images that are unforgettable in their immediacy and metaphorical power. Migrations documents mass migration through hundreds of pictures from thirty-five countries. The Children consists of nearly a hundred portraits of migrant, refugee, and displaced children under the age of 15.

Because Salgado's pictures are so exquisitely beautiful, some have criticized him for aestheticizing the dark side of the world. Had he been only after critical acclaim or career recognition, he could have cashed in long ago (he's received nearly every major photographic prize) and moved on to something else. His moral stamina in continuing this documentation is amazing.

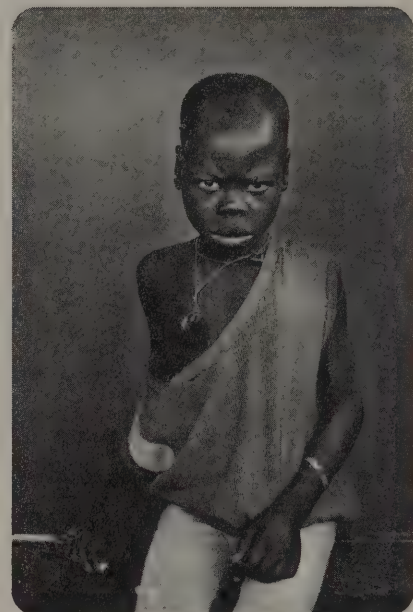
"I was probably drawn to this project," he has written, "by my own life on the move." He was born in the rural state of Minas Gerais in Brazil and studied economics in São Paulo. He and his wife left for Europe in 1969, when Brazil was under military rule, to become "part refugees, part immigrants, part students. Three decades later, we still live in a foreign land."

To the analytic mind of a trained economist, Salgado adds the fluid, intuitive, responsive eye of an artist. He conveys the immensity of mass migrations while reminding us that each migrant is an individual, catches us up in the human drama without sensationalizing it, and leaves the viewer with a sense of responsibility. When Aperture, his publisher, printed a few of these pictures in its magazine, I wanted to send a copy to everyone in Congress and at the UN.

—Linda Connor

"Every year, UNICEF publishes an alarming report about the state of children in the world. In disheartening details, it spells out the health, educational, and housing deficits that affect hundreds of millions of children around the world. This book of photographs attempts no such analysis. It merely shows ninety children from different parts of the globe on a particular day in their lives. They look beautiful, happy, proud, pensive, or sad. For a brief moment, they were able to say, "I am." Then all too soon they will become adults and more children will take their place. —THE CHILDREN

"I have no answers, but I believe that some answers must exist, that humanity is capable of understanding, even controlling, the political, economic, and social forces that we have set loose across the globe. Can we claim "compassion fatigue" when we show no sign of consumption fatigue? Are we to do nothing in face of the steady deterioration of our habitat, whether in cities or in nature? Are we to remain indifferent as the values of rich and poor countries alike deepen the divisions in our societies? We cannot. —MIGRATIONS

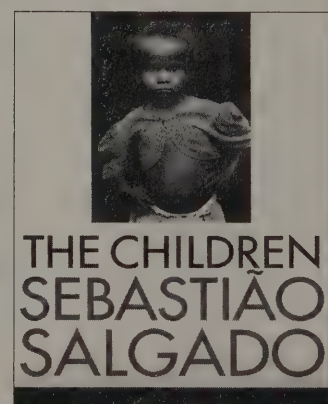
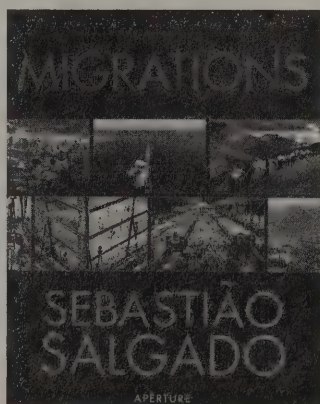


THE CHILDREN



MIGRATIONS

Top: Displaced children who have lost their families, Mopeia, Zambeze Province, Mozambique. 1994. Bottom: Atroosh, the largest Kurdish refugee camp of Iraqi Kurdistan, "home" to 12,000 Kurds displaced from Turkey. 1997.



Opposite: About 40,000 Rwandan Hutu refugees fleeing Zairian Tutsi are trapped in the village of Lula, Zaire. March 28, 1997. From *Migrations*.



BIONEERS CONFERENCE

Visionary & Practical Solutions for Restoring the Earth

October 18-20, 2002
Marin Center - San Rafael, CA

Presentations with:

Jeanne Achterberg Jeannette Armstrong Julia Butterfly Hill
Fritjof Capra Caroline Casey Dr. Larry Dossey Sylvia Earle
Boge Gebre Paul Hawken Christopher Hobbs Sandra Ingerman
Andrew Kimbrell Naomi Klein David Orr Sebastiao Salgado
Aqeela Sherrills John Todd And many more!

Special Highlights: Unreasonable Women for the Earth Ecological Medicine

Plus: Ecoliteracy Corporations & the Environment Natural Medicine Organic and Beyond

The Drug War Bust Environmental Justice Green Design Spirit and Nature

Genetic Roulette Indigenous Vision Art & Social Change Reporting the Environment

Organizing Meetings Mixers Film Screenings And lots more!

Conference Sponsors: Aubrey Organics Birkenstock Calvert & First Affirmative Financial
Clif Bar Eclectic Institute Organic Valley Cooperative Rudolf Steiner Foundation

Media Partners: Bay Area Naturally E Magazine Mother Jones
Mothering New Dimensions Radio Utne Reader Whole Earth

toll free 877-BIONEER · fax 505-986-1644 · www.bioneers.org · info@bioneers.org

For eco-friendly travel options, contact official Bioneers travel provider Manoa.com. Toll free 866-7MANAIA

from Watersheds to WORDS



"HELP ME!!!" AMADA ZAKARIA KOSHANI, AGE 11 (AFGHAN NATIONAL), QUETTA, PAKISTAN. 2002 FINALIST.

Looking at the Planet through the Poems and Pictures of Children

by Cherine Badawi

We learned about River of Words (ROW) last year from Point board chair Danica Remy, whose children attend Greenwood School in Mill Valley. 2001 was the fourth straight year that Greenwood (despite enrolling just fifty-four students) had produced at least two finalists—and a 2001 Grand Prize winner—out of 14,000 entries in ROW's annual poetry and art contest. There's lots more, too, to River of Words, as Cherine reports here. —MKS

No judges in the River of Words contest anticipated what they'd find when they opened their first-ever submission from Pakistan: a painstakingly painted picture of a boy sitting under a tree surrounded by dead goats.

The picture made it to the contest finals.

River of Words (ROW) is a Berkeley-based nonprofit that coordinates an annual international eco-focused poetry and art contest for children in kindergarten through twelfth grade. ROW also offers educator trainings and a "Watershed Explorer" curriculum that integrates outdoor explo-

ration with lessons in English, math, science, social studies, and the arts.

There is no fee to enter the contest. Finalists in the River of Words contest fit no distinct profile. They come from refugee camps, foster homes, and special ed classes. They also come from wealthy homes and elite private schools. Some speak Spanish, Persian, or American Sign Language. Some fall asleep to stars, rivers, and mountains; others to war, dying, and burning buildings.

ROW was created by former US poet laureate Robert Hass and writer Pamela Michael to address the increasingly apparent disconnect between children and the natural world. Since its inception in 1995, River of Words has aspired to build and bridge facets of communities; help kids recognize the interconnectedness of all things; give them a truer picture of their homeland and place in the world; promote literacy in all its forms; and, foremost, cultivate good Earth stewards for the future.

Know the Earth

To know the Earth
on a first-name basis
you must stand along the banks of
Papermill Creek and watch the
crawdads scamper from underneath one
rock to underneath the
next
You must watch the red-tailed hawk
circle Mt. Tam
You need to lie in the grass and watch
pill bugs that have sat
in the hands of local children
You should watch raccoons raid
plastic trash bins
Stare down at the silent sandstone
sitting on top of Mt. Baldie
until a child collects it and adds it to his
brimming rock collection
You must watch the lizard
scamper in the burning sun
To know Mother Earth
you need to
Love Earth's children

MARIEKE HODGE, AGE 10
SAN ANSELMO, CA
2002 FINALIST

Every year ROW's staff enthusiastically pores over more than 14,000 poems and works of art from lands as far away as Azerbaijan, the Ivory Coast, and Pakistan, and as close to home as Berkeley. ROW accepts poems in English, Spanish, and American Sign Language; Robert Hass and four other distinguished poets judge them. Art submissions, judged by children's book author and illustrator Thatcher Hurd, range in medium from pencil and pastel to photography and computer art. The judges annually select a US poet and artist from each of four age groups and one international winner. The nine winners receive all-expenses-paid trips to Washington, D.C., where they are honored at a ceremony and luncheon at the Library of Congress.

Each submission relates to the theme of watersheds.

"We chose 'watersheds' because it provides an adaptable framework for



"I GOT THE BLUES." GERALD ALLEN, AGE 13, BATON ROUGE, LA. 2002 FINALIST.

investigating the natural world," says Michael. A watershed is the area through which all waters flow from their highest point before draining to the sea. It encompasses everything in its periphery: mountains, forests, valleys, buildings, and the communities of plants, animals, and people who live there. Gary Snyder describes a watershed as "the first and last nation whose boundaries, though subtly shifting, are unarguable."

"Learning about our watersheds gets to the essence of how we have to understand our homegrounds," explains Hass, president of ROW's board of directors. "That is critical if we're ever to have a hope of managing

them effectively."

Through the ROW curriculum, kids learn that water doesn't start at the tap; where garbage comes from and where it goes; what the people who lived in their watershed centuries ago used to eat and wear. They hear the stories of elders and the wisdom of park rangers. They learn to see their environment and themselves in it.

"We feel that developing an intimate, hands-on understanding of the places we live is critical to growing healthy children," says Michael. "River of Words helps kids to be intensely and acutely aware of what's around them—using all the senses."

My Backyard

*Butler Creek is in my backyard
The ground is squishy.
The rocks are hard.
The water is cold and
The minnows have fins.
How do I know?
I fell in!*

TRAVIS BAKER, AGE 8
KENNESAW, GA
2002 FINALIST

"I think we can't have the hope of understanding other places and other people until we have a profound and intimate understanding of our own places and cultures," Michael remarks.

The River of Words curricular materials are intended as education and outreach tools for teachers, as well as for environmental grassroots organizations. ROW has been tied to creek restorations, schoolyard clean-ups, and community poetry readings.

"Some of the projects we hear about, and most of them we don't," explains Michael. One town in New Mexico created a River of Words parade highlighted by the artwork of local children. All the shops in town that day had baskets by the cash register where visitors could take a poem or leave a poem.

From the start ROW was as much about building community partnerships as it was about education, nature and the arts. In California, one elementary school teacher lead her class to a senior citizens' home that stood beside a creek. The students interviewed the elders, and then explored the creek together. Later, they returned to their classroom to write poems and paint about their experience. When the seniors received copies of the children's work, they were so moved that they invited the students to return, with their families. The seniors threw a party with their own poetry reading, inspired by the children.



"UNTITLED." MIRANDA DARLEY, AGE 11, MILL VALLEY, CA. 2002 FINALIST.

"It's like having your finger on the pulse of the youth of the world," Michael remarks. This year ROW received submissions from a border town in Pakistan that Michael suspects may be an Afghani refugee camp. The kids found out about the contest from a four-year-old *Ranger Rick* magazine and wrote to ask if it was still on. ROW soon found two submissions in their mailbox—one of a landscape filled with burning bushes, the other of a boy sitting under a tree surrounded by dead goats.

Michael explains that every year there's an emblem that crops up in the consciousness of the world's youth. One year it was tree hollows, another it was snow-capped mountains.

This year, she says, "What was overwhelmingly apparent was the use of the word 'tears.' It is really not an exaggeration to say that every third poem had the word 'tears' or 'weeping' or 'crying.'" Related to the events of September 11, perhaps? Michael thinks it's likely. "We've underestimated the psychic scars on the children old enough to understand what was going on—and maybe even some who weren't."

Heartbeat Winter

*If perhaps I close my eyes
I could forget standing
with my thoughts interrupted
by silence*

*I could fold myself
gently in snow
and forget
that the world never ends
on a Tuesday*

*everything would stop
folded in snow
but the trees
with branches too bare
to hold anything but sky
would pulse into blue
heartbeat winter*

*Breathing slowly
I can see
why I don't much mind the cold*

LINDSAY GRIFFIN, AGE 18
SALT LAKE CITY, UT
2002 FINALIST



"THE RIVER IS THE BASIS OF LIFE." STANISLAV SHPANIN, AGE 11, BAKU, AZERBAIJAN.
2002 GRAND PRIZE WINNER.

RIVER OF WORDS
PO Box 4000-J
Berkeley, CA 94704
510/548-POEM
www.riverofwords.org

**RIVER OF WORDS
EDUCATOR'S GUIDE**
50+ pp., \$6 (\$8 postpaid)
from River of Words (see
above)

Classroom and field
activities on watersheds
and the arts, designed to
help children discover their
"ecological address."

Whispering Snow

*The snow falls upon a whisper tree
and drops like ice into my mouth.
It falls like a peaceful sign,
a sunrise from heaven,
tumbling out from the air we breathe.
My mind thinks of snowbirds flying everywhere.
Is the world at a point that is dangerous?
Feel the glory of the heavens.
Feel the moonstones falling from the sky.
The future is like happiness beside me.*

KAILA ONTIVEROS, AGE 8
DURHAM, CA
2002 GRAND PRIZE WINNER

Dear Stars

*Please come down to me—
I cannot live on
Mist and moonshine
Alone
I meander, past
Cambered willows—they weep
And trail their
Haggard branches as the
Doves, lighting on an arching limb
Coo a low
Tremulous song, and a single note
Hangs in the air. But so ephemeral
Are these scintillas of
Joy. The very
Air itself is
Melancholy
Winds whisper a
Soft contralto to my
Plangent song. This is
Why I call to you, eternally
Luminescent stars—
For your company
I am willing
To wait.*

JANE JIANG, AGE 13
SEATTLE, WA
2002 GRAND PRIZE WINNER

And You Dance

*You are of water,
tiny droplets of light.
The motion in you,
a property of liquid.*

*How do you make your body
glide in such a luminous way
and move in perfect time
to the rhythm of the music,*

*flowing through us
like water making its way
through even the most
twisted landscapes?*

*The way you dance is an
elixir, a stunning mixture
of liquid and light,
inviting the hours to slip by.*

*I want to dance
to the point of liquidity
and have the music brim
from my fingertips, too.*

LAUREN CARLISLE, AGE 18
VICKSBURG, MS
2002 GRAND PRIZE WINNER

The Simple Life

*The crossroads to heaven make you feel like stones.
The roots of your ashes are like mountains.
The dirty country road makes the sky ahead look yellow.
The kingdom of green blooms in a special red way.
The fog upon the pond is in silence unknown
only two people know the stairs to roses.
My father floats in the air traveling like steel
making echoes that are getting closer.
The crickets make way to stars,
the stars are like traffic on an old silvery, rainy day, and
it is hard to breathe on the fountain of life or death.*

SCOTT LAFFLER, AGE 9
ALPHARETTA, GA
2002 GRAND PRIZE WINNER



"RIVER NYMPH." LEYLA GUSEYNOVA, AGE 14, BAKU, AZERBAIJAN. 2002 FINALIST.

Oda al Clavo

*El clavo
como la navaja
filoso,
brillante,
y construido de metal.
Explorando
la madera,
peleando
con el martillo,
escondiendo
detras de la pintura.*

*Casado
a la madera
primero besando,
despues abrasando
finalmente son casados
viviendo en familias
grande
para hacer
mi casa.*

Ode to the Nail

*The nail
Like a sharp
Knife,
Shiny,
And made of metal.
Exploring
The wood
Fighting
With
The hammer
Hiding
Behind the paint.*

*Married
To the wood
First kissing,
After hugging,
Finally they're married,
Living in big families
To make
My house.*

JENNA ARCHER, AGE 9
JEREMY GARRETT, TRANSLATOR
(4TH GRADE STUDENT)
BERKELEY, CA
2002 FINALIST



greenmuseum.org

518 Tamalpais Drive
Corte Madera, CA 94925. 415/924-9322
www.greenmuseum.org

It's a ghostly image. A small African frog, a member of the declining Hymenochirus genus, the contours of its back-lit body highlighted with red dye, its skeletal outline

revealing both beautiful symmetry and clinical finality. It is at once a work of art, a scientific specimen, and an environmental statement about the global decline of amphibious species.

The work of environmental artist Brandon Ballengée, the frog is just one of hundreds of images, representing numerous environmental issues, found at greenmuseum.org. This museum without walls, a website launched last December, seeks, among other things, to improve our relationship with the natural world by engaging us in various forms of creative expression.

For example, Daniel Dancer's Zero Circles Project promotes a grassroots movement to shape environmental art from found objects in the form of circles, the shape representing "zero pollution, zero waste, zero population growth, zero cut on public land...." Dancer, author of the book Shards and Circles, creates ephemeral and haunting outdoor works that quickly disappear in gusts of wind or rolling waves, but not

before being captured on film. He is one of more than thirty artists featured on the site, with more being added all the time.

Sam Bower, greenmuseum.org's executive director and a former member of the sculpting collaboration Meadowsweet Dairy, says the site was born after Meadowsweet was unsuccessful in creating a brick-and-mortar environmental art museum. "We decided we didn't need a building, so we did a website instead."

Now greenmuseum.org is creating both online exhibit space and a networked community of environmental artists from all over the world. The site also features a comprehensive calendar of events and exhibitions, and an interactive community discussion space called greenmuseumWiki.

Bower says greenmuseum.org is constantly looking for artists working with environmental issues, and for money to fund the nonprofit site.

—DB

Whole Earth

WE'RE ALL CONNECTED

Make it your
personal
statement



wear it

Embroidered above the pocket is just that message: *Whole Earth: We're all connected.* Order your soft, 100% cotton denim shirt today and tell the world you're connected.

ORDERING INFORMATION

QUANTITY	ITEM	COST	TOTAL
_____	Denim Shirt @	\$ 45 each	= \$ _____
GRAND TOTAL			\$ _____

Prices include UPS Ground shipping, tax & handling

Select Shirt Size ☐ xxl ☐ xl ☐ l ☐ m ☐ s

SHIPPING ADDRESS

Name _____
Address _____
Address _____
City _____
State/Country/Zip _____

BILLING INFORMATION

Total Amount Due \$ _____
☐ Check or Money Order (Payable to Whole Earth) or
Charge my: ☐ VISA ☐ Mastercard
Account Number: _____
Expiration Date: _____
Name on the Card: _____
Signature: _____

MAIL TO:
Whole Earth
1408 Mission Street,
San Rafael, CA 94901

FAX TO:
Whole Earth
415/256-2808
Please allow 4-6 weeks delivery time.

the merchants of **COOL**



MERCHANTS OF COOL

"The Merchants of Cool," a PBS Frontline program by Douglas Rushkoff, explores how advertisers/anthropologists find, define, and refine the evanescent "cool" in teen culture—and then turn their findings into marketing tools. Mamie Rheingold's review is followed by excerpts from the transcript. —MKS

The Merchants of Cool

As a teenage girl, the word "cool" is crucial to my vocabulary. It is a universal code that lets us all know which trends and fads are in, like low-cut yellow washed jeans and silver hoop earrings. Where do these trends come from? How did they become "cool"?

The Frontline presentation of "The Merchants of Cool" by pop culture critic Douglas Rushkoff, goes behind the scenes to reveal that "cool" does not spontaneously emerge from youth culture. "Cool" is meticulously researched and engineered. In fact, there is an invisible, interconnected web behind the creation of cool. For example, MTV produces hip-hop concerts where popular rap artists perform for free because MTV will showcase videos that promote the artists' CDs.

Meanwhile, large advertisements for Sprite, an MTV sponsor, are displayed in the background of the telecast concert. These interlocking, interpromoting companies have made a science of finding out what kids think is cool and then selling it back to us. They even pay anthropologist-investigators known as "cool hunters" to keep up with what the coolest kids are doing, and use that knowledge to design products. It is a perpetuating cycle, and we as teenagers are the instigators. We are involved in a symbiotic relationship with consumerism and media that shapes our opinions and influences our buying decisions—whether or not we are aware of that influence. Cool hunters seek us out for our opinions and then sell them right back to us. And we buy it without a thought about why. How do we fall into this trap? Watch "The Merchants of Cool."

—Mamie Rheingold

"Cool hunters seek us out for our opinions, and then sell them right back to us."

TRANSCRIPT EXCERPTS:

DOUGLAS RUSHKOFF, FRONTLINE: [voice-over] On a summer afternoon, in a downtown New York loft, corporate America is on a very serious mission. Five boys are here to be questioned about what they wear, what they eat, what they listen to and watch. For \$125 each, they're expected to answer. At 32 million strong, this is the largest generation of teenagers ever, even larger than their Baby Boomer parents. Last year teens spent more than \$100 billion themselves and pushed their parents to spend another \$50 billion on top of that. They have more money and more say over how they'll spend it than ever before.

BOB BIBB, TELEVISION MARKETING EXECUTIVE: Teens run today's economy. There's an innate feeling for moms and dads to please the teen, to keep the teen happy, to keep the teen home. And I think you can pretty much take that to the bank.

SHARON LEE, TEEN MARKET RESEARCHER: They're given a lot of what we call guilt money. "Here's the credit card. Why don't you go online and buy something because I can't spend time with you?"

DOUGLAS RUSHKOFF: For today's teens, a walk in the street may as well be a stroll through the mall. Anywhere they rest their eyes, they'll be exposed to a marketing message. A typical American teenager will process over 3,000 discrete advertisements in a single day, and 10 million by the time they're 18. Kids are also consuming massive quantities of entertainment media. Seventy-five percent of teens have a television in their room. A third have their own personal computer, where they spend an average of two hours a day online.

BRIAN GRADEN, TELEVISION PROGRAMMING EXECUTIVE: I think one of the great things about this information age is, with so many channels, you can say

VIACOM

That's the paradox
of cool hunting: It kills
what it finds. As soon as
marketers discover cool,
it stops being cool.



Madison Avenue, if you knew where the money was and where the power was and where the big houses were, then you knew what was going to happen next. And cool hunting was all about a kind of revolution that sets that earlier paradigm aside and says, in fact, it has to do with the influence held by those who have the respect and admiration and trust of their friends.

my business is 12 to 15, or my business is 21 to 24. As a result, you have the most marketed-to group of teens and young adults ever in the history of the world.

DOUGLAS RUSHKOFF: It's a blizzard of brands, all competing for the same kids. To win teens' loyalty, marketers believe, they have to speak their language the best. So they study them carefully, as an anthropologist would an exotic native culture.

ROB STONE, TEEN MARKETING EXECUTIVE: If you don't understand and recognize what they're thinking, what they're feeling, and then be able to take that in and come up with a really precise message that you're trying to reach these kids with in their terms, you're going to lose. You're absolutely going to lose.

DOUGLAS RUSHKOFF: What makes this market so frustrating is that they don't operate the same way as the rest of us. They're a stubborn demographic, unresponsive to brands and traditional marketing messages. But there is one thing they do respond to: cool. Only cool keeps changing. So how do you map it, pin it down? What is cool anyway? The search for this elusive prize has its own name: "cool hunting."

MALCOLM GLADWELL, WRITER, THE NEW YORKER: "Cool hunting" is structured around, really, a search for a certain kind of personality and a certain kind of player in a given social network. For years and years on

DOUGLAS RUSHKOFF: Many companies don't trust themselves to do this kind of research, so they hire experts who can find these cool kids and speak their language. Dee Dee Gordon is a sought-after cool hunter. Just 30 years old, she commands high fees as a consultant to some of the largest corporations in America and has been the subject of a *New Yorker* profile. Gordon and Lee have put together a team of what they call "correspondents": all young, all former cool kids themselves. They're culture spies, who penetrate the regions of the teen landscape where corporations aren't welcome.

DEE DEE GORDON: A correspondent is a person who's been trained by us to be able to find a certain kind of kid, a kid that we call a trendsetter or an early adopter. This is a kid who's very forward in their thinking, who looks outside their own backyard for inspiration, who is a leader within their own group. These kids are really difficult to find. So this correspondent goes out and they find and identify these trend-setting kids. They interview them. They get them interested in what we do. They send all that stuff in. We look at it. We compile it. We look for trends or themes that are happening through all the information, and that's the stuff that we put on our website [Look-Look.com].

DOUGLAS RUSHKOFF: For a subscription fee of \$20,000 each, companies are

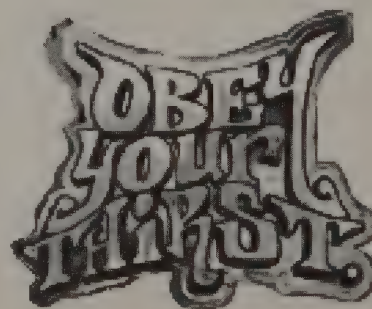
granted access to the Look-Look website, a Rosetta Stone of teen culture. If companies can get in on a trend or subculture while it is still underground, they can be the first ones to bring it to market.

DEE DEE GORDON: And that's when the mass consumer picks up on it and runs with it and then eventually kills it.

DOUGLAS RUSHKOFF: And that's the paradox of cool hunting: It kills what it finds. As soon as marketers discover cool, it stops being cool.

MALCOLM GLADWELL: The faster you pick up on these trends and blow them out and show them to everybody and reveal them to corporate America, the more you force the kind of person who starts them and spreads them to move on and find the next. There's no kind of solution to this. You can't ever solve the puzzle permanently. By discovering cool, you force cool to move on to the next thing.

DOUGLAS RUSHKOFF: This creates a problem for marketers. Kids begin to see them as the enemy. So what do marketers do? Market to kids without seeming to do so, become cool themselves, as Sprite did a few years ago. In the early '90s, Sprite was an also-ran brand in the competitive soft



drink category. Their focus groups with teenagers were designed to find out what was wrong.

PINA SCIARRA, DIRECTOR OF YOUTH BRANDS, SPRITE: What we found by talking to teens is that they had seen so much advertising that they were on overload and became very cynical about that traditional approach to advertising.

DOUGLAS RUSHKOFF: Then they launched this ad campaign aimed at teens, which pokes fun at marketing itself.

PINA SCIARRA: There was really no one in the market at the time that was saying, "Discount it all. Don't believe it. It's all BS, and we know that you know that. And you're smarter than everyone else." So it put them in a position to feel like we understood them, so that they were feeding back to us, "You know, Sprite understands me. Sprite is one"—you know, "It's really one of us."

DOUGLAS RUSHKOFF: Former record executives John Cohen and Rob Stone run a New York marketing firm called Cornerstone. Their specialty is under-the-radar marketing. For instance, Cornerstone hires kids to log into chat rooms and pose as just another fan of one of their clients. They also recruit incoming freshmen to throw parties, where they pass out promotional material to their classmates.

The days of developing cute campaigns or whatever don't work anymore. You have to really get involved in what their culture is. You have to understand where they're coming from. You have to think how they think.

...It worked. Thanks to the teens who buy it, Sprite is now the fastest-growing soft drink in the world. Sprite invited us to a kick-off party for their new website, *Sprite.com*. Scores of kids were paid to show up and revel in the sounds and styles of urban authenticity. While we were there, some of the biggest acts in rap music appeared on stage under the company logo. Here it was, the ultimate marriage of a corporation and a culture. Sprite and hip-hop had become one and the same, each carrying the other to its audience.

PINA SCIARRA: Sprite has really become an icon. It's not just associated with

hip-hop, it's really a part of it. As much as baggy jeans and sneakers, Sprite has become an icon in hip-hop culture.

DOUGLAS RUSHKOFF: Is it nostalgic to think that when we were young it was any different, that the thing we called "youth culture" wasn't something that was just being sold to us, it was something that came from us, an act of expression, not just of consumption? Has that boundary been completely erased? Today five enormous companies are responsible for selling nearly all of youth culture. These are the true merchants of cool: Rupert Murdoch's NewsCorp, Disney, Viacom, Universal Vivendi, and AOL/Time Warner.

ROBERT MCCHESNEY, COMMUNICATIONS PROFESSOR, UNIVERSITY OF ILLINOIS: The entertainment companies, which are a handful of massive conglomerates that own four of the five music companies that sell 90 percent of the music in the United States—those same companies also own all the film studios, all the major TV networks, all the TV stations pretty much in the ten largest markets. They own all or part of every single commercial cable channel.

They look at the teen market as part of this massive empire that they're colonizing. You should look at it like the British empire or the French empire in the nineteenth century. Teens are like Africa, that's this range that they're going to take over, and their weaponry are films, music, books, CDs, Internet access, clothing, amusement parks, sports teams. That's all this weaponry they have to make money off of this market.

DOUGLAS RUSHKOFF: Of the five media giants, the coolest conglomerate on the block is Viacom. And Viacom's crown jewel is MTV, which last year earned the company a billion dollars in profits. MTV launched twenty years ago with a simple but brilliantly commercial concept: use record companies' promotional music videos as creative programming. Since then, the cable

channel has grown into a youth marketing empire, but its basic business model has remained the same.

ROBERT MCCHESNEY: Everything on MTV is a commercial. That's all that MTV is. Sometimes it's an explicit advertisement paid for by a company to sell a product. Sometimes it's going to be a video for a music company there to sell music. Sometimes it's going to be the set that's filled with trendy clothes and stuff there to sell a look that will include products on that set. Sometimes it will be a show about an upcoming movie paid for by the studio, though you don't know it, to hype a movie that's coming out from Hollywood. But everything's an infomercial. There is no noncommercial part of MTV.

DOUGLAS RUSHKOFF: Take MTV's daily program *Direct Effects*. Sprite rents out the Roseland Ballroom and pays kids fifty bucks a pop to fill it up and look cool. The rap artists who perform for this paid audience get a plug on MTV's



Cool hunters comb the streets with digital cameras and notepads to discover the "next big thing" that will capture the hearts and wallets of America's youth.

MERCHANTS OF COOL

show, *Direct Effects*, for which Sprite is a sponsor. MTV gobbles up the cheap programming, promoting the music of the record companies who advertise on their channel. Everybody's happy.

But while this cross-promotional free-for-all may maximize returns for MTV and Viacom, it also violates the first rule of cool: don't let your marketing show. MTV learned this lesson

the hard way a few years ago when their ratings began to slip.

BRIAN GRADEN, PRESIDENT OF PROGRAMMING, MTV: There was a perception that MTV had lost its way a bit with the young consumer. Ratings were down somewhat. Some of the trend studies said that we were less cool, less creative than before.

DOUGLAS RUSHKOFF: So MTV had the humility to realize that cool was not their birthright, that it belongs to kids, and kids keep changing. If they wanted to stay cool, they'd have to change right along with them.

BRIAN GRADEN: We immersed ourselves in research about the fall of '97 and have been able to turn that around to where now our rankings, when it comes to creative or original or funky or anything you would care about musically relevant, have went way, way up, and our ratings are their highest in their history.

DOUGLAS RUSHKOFF: The new MTV is all about learning what kids really want, then delivering it to them. Their signature show, *Total Request Live*, plays music videos by popular demand. And every afternoon, mobs of kids crowd into Times Square to gaze up at the windows of the *TRL* studio to see whichever mega-band might be making a guest appearance. To insure that bond stays strong, MTV must understand where teen culture is moving. Market research is the mantra, and its guru is Todd Cunningham.

TODD CUNNINGHAM, SENIOR VICE PRESIDENT OF BRAND STRATEGY AND PLANNING, MTV: The research efforts at MTV are certainly legendary. There's been a kind of feverish addiction to research and understanding young people. And that's been embraced from the very top down.

DOUGLAS RUSHKOFF: MTV let us in on their techniques. Todd Cunningham told us to meet him at an address in the small town of Iselin, New Jersey. A short time after we arrived, a black Town Car pulled up. Cunningham, a former advertising industry executive, emerged with a member of his staff. This little field trip, Cunningham had explained, is called an ethnography

study, in which MTV market researchers visit a typical fan in his home.

TODD CUNNINGHAM: We shut the door in their bedrooms and talk to them about issues that they feel like are really important to them. We talk with them about what it's like to date today, what it's like dealing with their parents, what things stress them out the most, what things are, like, really on the hearts and minds of them and their peers. It's captured on video, so we have a camera crew, sound and light crew there. We cut that videotape together, put it to

To win teens' loyalty,
marketers believe,
they have to speak
their language the
best. So they study
them carefully, as
an anthropologist
would an exotic
native culture.

music, edit it in an MTV-style way. We then take that around and show it to various department meetings.

DOUGLAS RUSHKOFF: So what happens to all this careful research, all the hours and dollars that MTV spends learning about who our kids really are? When all the tape is reviewed, what portrait of the American teenage male emerges? His critics call him "the mook." That's right, m-o-o-k, mook. And you can find him almost any hour of the day or night somewhere on MTV. He's not real. He's a character—crude,

loud, obnoxious, and in-your-face. He's Tom Green of *The Tom Green Show*. And he's the daredevils on Jackass who indulge in dignity-defying feats like poo diving. He's those frat boys and their whip-cream bikini girlfriends on MTV's constantly recurring spring break specials. He has migrated to MTV's sister network, Comedy Central, where he's the cartoon cutouts of *South Park* or the lads on *The Man Show*. The mook is perhaps Viacom's most bankable creation. Once programmers discovered his knack with teenage boys, they replicated him across the length and breadth of their empire. Take Howard Stern, perhaps the original and still king of all mooks. Look how Viacom leverages him across their properties. He is syndicated on fifty of Viacom's Infinity radio stations. His weekly TV show is broadcast on Viacom's CBS. His number one best-selling autobiography was published by Viacom's Simon and Shuster, then released as a major motion picture by Viacom's Paramount Pictures, grossing \$40 million domestically and millions more on videos sold at Viacom's Blockbuster video.

...There is no mook in nature. He is a creation designed to capitalize on the testosterone-driven madness of adolescence. He grabs them below the belt and then reaches for their wallets.

ROBERT MCCHESENEY: What MTV is struggling with is what's going on with all our cultural industries. We have fewer and fewer owners but more and more choices, so they have to desperately find ways to keep people looking for gimmicks, and they don't have a huge timeframe to establish an identity. With the remote control, you know, your shelf life of chances to keep someone, to get them to stay there, is very short.

You can't develop a character for six weeks. They're going to be gone after two minutes. So it puts pressure on commercial culture providers, like MTV, to try to find the sort of things that their research shows will click right away, recognizable things, and play on those.

DOUGLAS RUSHKOFF: And girls get dragged down there right along with boys. The media machine has spit out a second caricature. Perhaps we can call this stereotype "the midriff." The midriff is no more true to life than the mook. If he is arrested in adolescence, she is prematurely adult. If he doesn't care what people think of him, she is consumed by appearances. If his thing is crudeness, hers is sex. The midriff is really just a collection of the same old sexual clichés, but repackaged as a new kind of female empowerment. "I am midriff, hear me roar. I am a sexual object, but I'm proud of it."

The midriff archetype is undoubtedly teenage mega-star Britney Spears, whose latest album, *Oops I Did It Again*, has sold over eight million copies. She hit the scene at 16 with "Baby, One More Time," as a naughty Catholic schoolgirl bursting out of her uniform. When it came time for a spread in *Rolling Stone*, the 17-year-old self-professed virgin Britney struck the classic nymphet pose. And at the Video Music Awards when Britney finally and famously came out of her clothes, she wasn't just pleasing eager young boys, she

was delivering a powerful missive to girls: your body is your best asset. Flaunt your sexuality even if you don't understand it. And that's the message that matters most because Britney's most loyal fans are teenage girls.

BOB BIBB: Everyone else was going the edgy route, so maybe we ought to go completely different. And there was about a year period where we went family-friendly. And I think our slogan was "Where America's families can watch television together." That was a novel approach at the time because, except for maybe *The Wonderful World of Disney*, families could not watch television together. So you know, programming and marketing met, and we thought that's going to be our angle.

DOUGLAS RUSHKOFF: But the WB's family-friendly shows had to compete against programming like the eye-grabbing sex scenes of *Beverly Hills 90210* and other risqué teen dramas. By its third season, the WB made a course change. Their new trajectory: *Dawson's Creek*, a show about a group of sex-obsessed high school friends in an idyllic Cape Cod town. On Dawson's first episode, one of its lead characters, 14-year-old Pacey, begins a sexual affair with his teacher. In bringing teen sexual content to what had always been network TV's 8:00 family hour, *Dawson's Creek* and the WB made the headlines. However reluctantly, they had raised the sexual stakes even further. What would teens come to expect from TV now? Who would top *Dawson's*? MTV, that's who, by launching a new nighttime soap unambiguously entitled *Undressed*. Dispensing with plot almost completely, its quick-cut, channel-

surf-resistant vignettes draw their characters so thinly they nearly disappear. It's sex TV's answer to wrestling, stringing together explosions of "pop" to keep its teen audience hooked.

DOUGLAS RUSHKOFF: The makers of teen TV argue that they're only reflecting the real world. Sex is a part of teens' lives, so it better be in their media, too. Media is just a mirror, after all. Or is it?

...Take the annual migration of college and high school kids to spring break. For the past fifteen years, MTV has packaged spring break into a staged television performance, and then repackaged it through the year on show after show.

...Kids are invited to participate in sexual contests on stage or are followed by MTV cameras through their week of debauchery. Sure, some kids have always acted wild, but never have these antics been so celebrated on TV. Who is mirroring whom? Real life and TV life have begun to blur. Is the media really reflecting the world of kids, or is it the other way around? I'll never forget the moment that 13-year-old Barbara and her friends spotted our crew during a party between their auditions. They appeared to be dancing for us, for our camera, as if to sell back to us, the media, what we had sold to them. And that's when it hit me: It's a giant feedback loop. The media watches kids and then sells them an image of themselves. Then kids watch those images and aspire to be that mook or midriff in the TV set. And the media is there watching them do that in order to craft new images for them, and so on.

Is there any way to escape the feedback loop? **WR**

The Merchants of Cool (video)

Douglas Rushkoff, correspondent and consulting producer. Rachel Dretzin, writer. Barak Goodman, director. Barak Goodman and Rachel Dretzin, producers

Original airdate: February 27, 2001

60 min. \$19.98 (\$24.93 postpaid)

PBS Video

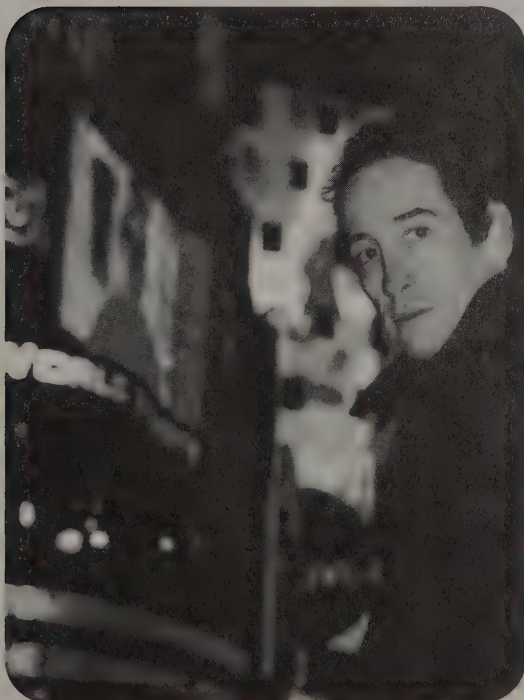
PO Box 791, Alexandria, VA 22313-0791

800/328-7271, www.pbs.org/wgbh/pages

[/frontline/shows/cool/etc/tapes.html](http://frontline/shows/cool/etc/tapes.html)

Transcripts may be downloaded

from same website.



Douglas Rushkoff.

great green gatherings

by David Kupfer

I first experienced the magic of collective gatherings at the Whole Earth Jamboree (*CoEvolution Quarterly*, Winter 1978) and the New Games Festivals in Marin County twenty-five years ago. I was quickly taken by the positive energy of shared group intent and utopian visions. Later, as a student at UC Davis, I became (and remain) involved in the now-33-year-old Whole Earth Festival, an annual free rite of spring produced on the campus for and by students over Mother's Day weekend. It features music, dance, holistic health, appropriate tech education and demonstrations, cottage art, and veggie food (www.wholeearthfestival.org).

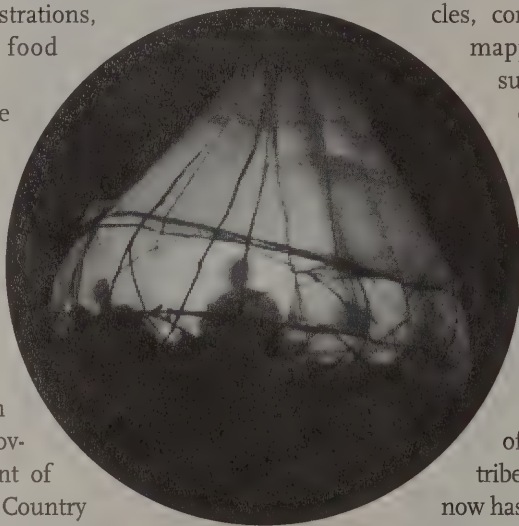
There are an incredible number of music, art, and cultural festivals today. (www.festivalfinder.com lists thousands. They range from accordion (www.cotatifest.com) to zydeco (www.zydeco.org), to garlic (www.garlicfestival.com), but I've been drawn particularly to the innovative educational environment of such festivals as the Oregon Country Fair, Britain's Glastonbury Festival, and the green gatherings that have grown out of them, organic fests in Seattle and Massachusetts, and the *communitas* of the Pacific Northwest's Barter and Herbal Faires.

They have become so etched into the contemporary landscape that one can spend every weekend from Memorial Day to Labor Day attending one. Usually well removed from the demands and distractions of modern life, they are places where idealists run free and artists and visionaries create and inspire.

The gatherings are characterized by a kaleidoscope of images: domes, multi-colored banners, tipis, yurts, parades, jugglers, unicycles, giant puppets, windmills, solar panels, bicycle-powered machines, vaudevillians, kids and elders at play, music and dance, rock and roll, spontaneous performance and merri-ment. Many are showcases for state-of-the-art ideas about organic agriculture, food self-reliance, permaculture, green energy, alternative shelter (including onsite construction), practical green and healthy housing, human-powered and electric vehicles, composting toilets, bioregional mapping, community currency, sustainable forestry, and a host of other tools, schemes, and techniques for living lighter on the land.

One of the most revered of these gatherings is the 33-year-old Oregon Country Fair (OCF). Attracting close to 50,000 people over three days, OCF is the Pacific Coast's paramount gathering of (mostly white) alternative tribes. Begun by hippies, the event now has full-time staff of six, and thousands of volunteers who work year-round to create the annual village.

"We are a reflection of the dominant culture and an alternative to it," says Leslie Scott, the Fair's general manager. When the land they had been renting became available for purchase in the early 1980s, Fair organizers launched a huge fundraising effort that led to their securing a permanent space for the community to enjoy all year. The Fair family meets regularly and publishes a monthly newsletter. Its strong commitment to community is key to its longevity.



Above: "Onion" tent at the Welsh Green Gathering (see page 65).

MARK PICKTHALL



MARK PICKTHALL

Festivals like these create a place, full of rituals and fun, where you can camp for the weekend or visit for the day. The food and drink are healthy and natural. Organic producers abound. The music—from blues and folk to dub and organic house—plays all day. At night the fires are lit and people gather to make music.



MARK PICKTHALL

2002 Festivals

Festivals have been around since the pagans and druids gathered to drink mead, celebrate the solstices and equinoxes, and bonk the night away. The following share implicit goals: to honor the Earth, further social transformation, educate and inspire with positive solutions and visions, and party and laugh in the face of global calamity.

While they were born and evolved independent of each other, they reflect alternative culture emerging around the globe, born out of the counter-cultural spirit of the 1960s and 1970s. They are for people, not for profit. None was dreamt up by local tourist boards or chambers of commerce, or grew out of corporate commercial culture.

I've tried to note features unique to each. Most of them offer (in various combinations) music, storytelling, crafts, local foods, and workshops and demonstrations of energy alternatives and other options for sustainable living.

June

Clearwater Great Hudson River Revival

June 15–16
Croton-on-Hudson, New York
Clearwater.org/festival.html

Westchester County's spectacular Riverpark at Croton Point is the setting for this multi-cultural extravaganza. Over ninety performers on five stages (Richie Havens, Maria Muldaur, John Hammond, Alvin Youngblood Hart, Dar Williams, Pete Seeger, Bread & Puppet Theater, among others) with a blend of contemporary, ethnic, and traditional music and dance, from blues to rock, funk to gospel, bluegrass to Cajun.

Fish puppets, drumming, and song call all to the water's edge for a blessing of the river. Workshops on sustainable energy as well as yoga, tai chi, and meditation. Vaudevillian players, jugglers and clowns.

Renewable Energy & Sustainable Living Fair

June 21–23
ReNew the Earth Institute
Custer, WI
www.the-mrea.org

This festival, sponsored by the Midwest Renewable Energy Association, is the world's largest venue to learn about renewable energy, energy efficiency, and sustainable living. Over 100 workshops, demonstrations, and entertainment, powered by a variety of mobile renewable energy systems.

July

Firemaker Primitive Skills Gathering

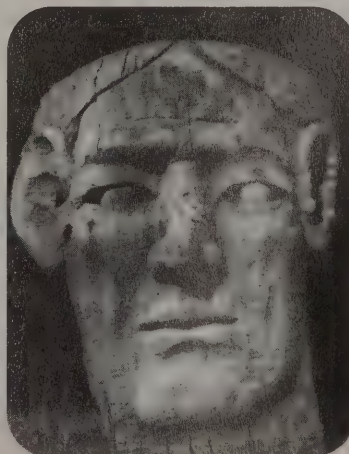
July 4–7
Near Victoria, BC
250/339-3197
www.firemaker.org

An all-ages family event to explore wild plants, beading, nature art and awareness, firemaking, wild survival, drumming, the medicine wheel, and community.

Eno River Festival

July 4–7
Durham, NC
www.enoriver.org/festival/

This festival, adjacent to the Eno River, educates locals about issues related to the river's health through interactive stream habitat and watershed activities. Besides quality music and camaraderie, a phenomenal spoken word assemblage of North Carolina's finest writers and storytellers is featured.



Above and right:
Welsh Green Gathering.



Left: Oregon Country Fair (see this page).



Oregon Country Fair

July 12-14
Veneta, OR
www.oregoncountryfair.org

Music, vaudeville, juggling, magic, and occasional mayhem on a dozen stages, spontaneous parades, salmon runs, arts and crafts, public art, a meditation area and spiritual getaway, theater, storytelling, educational presentations, a slew of kid and teen activities, and an onsite sauna known as The Ritz for the path-weary. Environmental, forestry, organic agriculture, renewable energy, and resource conservation ethics are taught through workshops and demonstrations. This year's Fair features a tribute to longtime supporter and former resident magician Ken Kesey. Speakers include Paul Krassner and Ram Dass.

Women of all ages explore and celebrate their sacred selves and sacred wildness in a place of power. Brilliantly colored cliffs, giant pines, and native petroglyphs of New Mexico's enchanted Gila Mountain are the backdrop for sharing circles, workshops, medicine sweats, spontaneous ritual, play, wildcrafting, incredible feasts, and ecstatic riverside dancing.

SolWest Renewable Energy Fair

July 26-28
Grant County Fairgrounds
John Day, Oregon
PO Box 485,
Canyon City, OR 97820
541/575-3633, www.solwest.org

The largest energy fair in the Pacific Northwest, with workshops on renewable energy and sustainable living topics and fifty exhibitors with tools for self-reliance.

SolarFest Renewable Energy Festival

July 13-14
Daisy Hollow Road
Middletown Springs, VT
802/235-2866
solarfest.org

Workshops on strawbale building, timber framing, sustainable agriculture, poetry, and self-publishing complement SolarFest's solar and renewable energy topics. Music on two stages, storytellers, puppets, theater, and workshops in a setting tucked into the woods.

The Wild Women's Gathering

July 20-27
The Earthen Spirituality Project
PO Box 516
Reserve, NM 87830
www.concentric.net/~earthway

Northeast Organic Farming Association (NOFA) Summer Conference

August 9-11
Hampshire College
411 Sheldon Road, Barre, MA 01005
978/355-2853
ma.nofa.org

More than 150 workshops on basic and advanced organic farming and gardening, animal husbandry, homesteading, herbs and flowers, sustainable building, organic activism, nutrition, health care and spirituality. Parallel conferences for children, pre-teens, and teens.

Neo Humanist Ecology Festival

August 12-16
Jelenia Gora, Poland
www.ru.org/ecofest

The festival takes place on a 46-hectare organic farm located in a beautiful valley surrounded by pine trees—a center for ecological, educational, and social service activities of the Ananda Marga Society of Poland. The program includes organic farming, beekeeping, bread baking, animal rights, holistic medicine, neo-humanism, vegetarianism, yoga and meditation. Evening programs feature singing and acoustic music.

August

Bikesummer 2002

All month
PO Box 786
Portland, OR 97207
www.bikesummer.org/2002

This month-long celebration/affirmation of cycling in the city has been held previously in San Francisco, Chicago, and Vancouver. Rolling adventures and cycle-culture exhibits, exchanges, workshops, camping trips, tours, and occasional radical anarchy (this is the Critical Mass crowd).

Ecotopia 2002

August 10-24
Glentanassig, Dingle Peninsula,
County Kerry, Ireland
www.eyfa.org/ecotopia2002.htm

Ecotopia, which has taken place in France, the Czech Republic, Holland, Hungary, Germany, Romania, and Finland, is a functional model of a self-sustainable community: waste recycling, vegetarian kitchen, consensus decision-making, and use of alternative energy. This year will focus on conflict resolution.

The Welsh Green Gathering 2002

August 8-11
Margam Country Park
75A Terrace Road
Walton on Thames
Surrey, KT 12 2SW, England
www.big-green-gathering.com

Alternative technology, wind, solar, pedal power, clowns, the arts, permaculture and sustainable homes, alternative therapies, tipi circle, greenmarket, and a special Green Wales Forum on energy, food, farming, transport, education, and the environment.

Sustain Up North

August 22-26
West Yorkshire, England
011-3-224-9885
www.ngg.org.uk

An annual green gathering on an organic farm in Yorkshire with workshops, exhibits, theater, all sustainably run on wind and solar power.

SolFest 2002

August 24-25
Hopland, CA
www.solarliving.org

The Real Goods Institute for Solar Living celebrates the sun's power with a two-day festival offering provocative speakers (including Paul Hawken and Amy Goodman) and workshops. Live music, children's activities, tours of the Solar Living Center, organic food, Earth-friendly product vendors.

Southern Energy & Environment Expo

August 23-25
Western NC Agricultural Center
Fletcher, NC
www.seeexpo.com

Showcases modern, sustainable energy technologies and regional green enterprises for the Southern Mountain Region. Workshops and presentations cover solar energy, wind power, small-scale hydro, alternative building techniques, community activism. Children's activities and entertainment.

September

Seattle Tilth's Organic Harvest Fair

September 14
4649 Sunnyside Avenue North, Seattle
Seattle Tilth Association
206/633-0451
www.seattletilth.org/activities/harvest2002

Highlights include an all-organic farmer's market, a tomato taste-off, organic wine tasting, a

festival of Seattle's bread bakers, live music, an Emerald City chicken contest, presentations such as double digging and soil prep for the winter garden, threshing and saving seed, children's activities and games (compost relay, three-legged morning glory tangle, squash car races), and a parade.

Green Nations Gathering

September 13-15
Frost Valley YMCA Camp, Claryville, NY
www.partnereartheducationcenter.com

Green Nations are tribes and clans of plants and people who love plants: herbalists, gardeners, foragers, Earth-centered ones such as Native Americans. They gather to learn from each other, network, play, and renew commitments to live in harmony on the Earth. Workshops include trans-generational herbal therapy, apprenticing with the trees, natural hormone replacement therapy for men, botanical therapies for dysfunctional uterine bleeding.

Organic Faire

September 22
Rossinver, County Leitrim, Ireland
www.theorganiccentre.ie/

A harvest festival for organic producers and consumers in the northwest of Ireland. Organic producers, environmental organizations and craftspeople, music, children's activities, demonstrations. Guided tours around the center will showcase its wetland sewage disposal system, children's garden, taste garden, heritage garden, unusual vegetables and salads garden, display of composting techniques, willow sculpture area, and orchard.

Apple Festival 2002

September 29
Apple Luscious Organic Orchard
110 Heidi Place
Salt Spring Island, BC V8K-1W5
250/653-2007
www.appleluscious.com

Apple tasting, baking, history, identification, and displays of nearly 200 apple varieties, along with fourteen orchards open for tours. Called the "Organic Gardening Capital of Canada," Salt Spring Island—among the first areas in BC to grow apples—now grows over 350 organic varieties.

Prairie Festival

September 21-22
Salina, KS
www.landinstitute.org

Sponsored by Wes Jackson and other *Whole Earth* friends at the Land Institute, the festival features speakers, artists, music, dancing, guided prairie walks, children's activities, camping, music-making, a barn dance, and other activities centered on sustainability, environment, and education. The Land Institute is dedicated to reinventing a high plains agriculture that works like a prairie—a polyculture of perennial species.

Common Ground Country Fair

September 20-22
Maine Organic Farmers and Gardeners Association (MOFGA)
PO Box 170
Unity, ME 04988
207/568-4142
www.mofga.org

Fairgoers visit farmers and their livestock, eat Maine-grown organic foods, enjoy music and entertainment, learn basic gardening skills and see vendors of Maine-made crafts, folk arts, food, plants, agricultural implements, and tools for environmentally friendly living. The Fair started in 1977 and now hosts 50,000 to 60,000 visitors each year.

The Okanagan Family Barter Faire

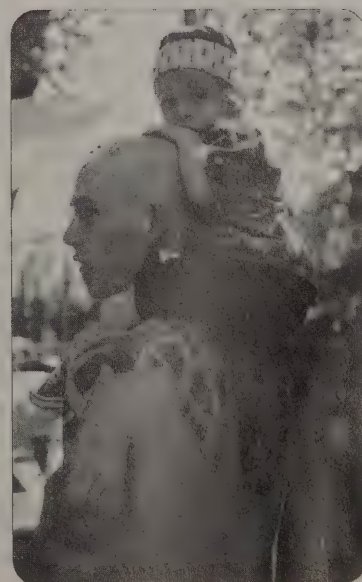
Date TBA
Tonasket, WA
509/486-2173
www.barterfair.org

A family camp-out and harvest festival. Bring your hand-crafted crafts and homegrown garlic, veggies and fruit, musical instruments, tipis, yurts, tarps, and tents. The organizers expect responsible, cooperative participants who will volunteer at least one hour of time to the Fair and the community. The Faire includes an onsite creation of a weekend Okanagan village.

Organic River Festival

January 18-20, 2003
Kimberly Reserve, Levin, New Zealand
www.organic4t.com

Organic food and wine with over twenty cafés and restaurants situated along the river, supervised swimming holes, children's entertainment, music and dance, alternative entertainment, new sustainable technology, and workshops over the Wellington Anniversary weekend.



GEOFFREY SQUIER SILVER

Oregon Country Fair.

Resources

Herbal Gatherings

Friends of the Trees
PO Box 253, Twisp, WA 98856, 509/997-9200
www.friendsofthetrees.net/news.htm#gather

Michael Pilarski founded and helped produce numerous herbal gatherings and barter faires in the Pacific Northwest. He has assembled an invaluable list of herbal gatherings happening around the West.

Holidays, Festivals, and Celebrations of the World Dictionary

Helene Henderson and
Sue Ellen Thompson, eds.
2002 (3rd ed.); 1,000 pp. \$98
Omnigraphics

Since primitive times, festivals have celebrated the religious mysteries of existence—the enigma of birth, death, and rebirth. They fill a deep-seated need to participate viscerally in the promise of spring, the joy of summer, the harvest and the decline of the year through fall to the rigors of winter, and the promise of a new spring. They acknowledge, honor, and propitiate the divinity at the depths of these mysteries.

The Dictionary describes more than 2,500 popular, secular, and religious events in 100 nations around the globe. Entries contain contacts, historical and printed sources, and the origin and background of the holiday and its observance. This unparalleled compendium would be useful to any school, library, or person interested in learning more about festive events.

“Itul

Early December

This highly regarded ritual is a ceremonial dance performed by the Kuba people who live in the Congo. It takes place on an infrequent basis. The Itul is considered so important that once the word spreads that the ceremony is taking place, Kuba people from all over rush to attend it. It is revived from time to time by kings who fear that their traditional power is being threatened by modern secular life.

“World Eskimo-Indian Olympics

Mid-July

A gathering in Fairbanks, Alaska of native people from throughout the state and Canada to participate in games of strength and endurance. Events include the popular

blanket toss, which originated in whaling communities as a method of tossing a hunter high enough to sight far-off whales. The tessees are sometimes tossed as high as 28 feet in the air.

Great Festivals of the World Stories from the Greatest Celebrations on the Planet

Ian Jackson, ed.
2001; 190 pp. \$18.95
Pilot Productions

These fifteen essays take readers to Brazil's Rio Carnival, Malaysia's Taipusam in Kuala Lumpur, Italy's Venice Carnival and the Palio horse race in Sienna, Ethiopia's Timkat Festival, and Mali's Takubelt Tuareg Festival.

For the global trekker wanting to experience these great festivals firsthand, I know of no better guide. Along with each essay are useful tips, facts, and current references enabling travelers to survive and thrive in hectic, fest-filled environs.

“A Great Festival is one that stands out from the rest. It might be because it is the biggest. The maddest. The most unexpected. The most bizarre. The most unique. A Great Festival is really one that you should take part in before you die.

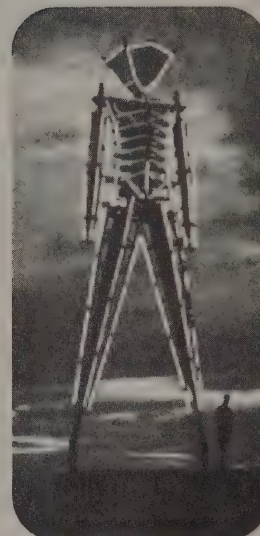
“The Takubelt Tuareg Festival is a celebration of the traditional desert culture of the impoverished, embattled Tuareg clans of Mali. For the foreign visitor, the festival is a music-led event which gives an insight into desert lifestyle, crafts, and camel culture. For the locals, it is about these things too, but also has useful social and political undertones. It's an opportunity for them to maintain cultural links with the other Tuareg populations in Niger, Algeria, Libya and Mauritania.

David Kupfer is a regular contributor to *Whole Earth*. His most recent article, on “Ecofolk” music, appeared in the Spring 2002 issue.



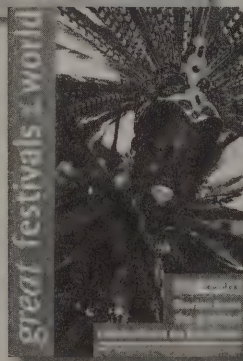
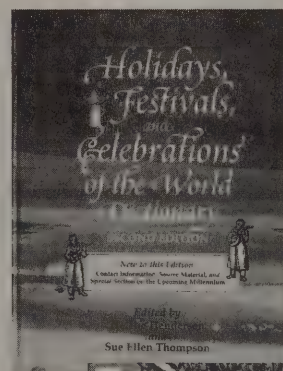
Takubelt Tuareg Festival, Mali.

GREAT FESTIVALS OF THE WORLD.



Burning Man, Nevada.

GREAT FESTIVALS OF THE WORLD.



west meets east

A new hybrid combines the best features of shakuhachi and Western concert flutes.

by Robbie Hanna Anderman

From the perspective of a musician who was introduced to flute playing via the end-blown bamboo shakuhachi, the common Western transverse metal concert flute has a couple of advantages:

1. the relative ease of playing any note in the chromatic scale (traditional bamboo/cane flutes are stuck in one key, like a harmonica—though shakuhachi masters seem to have no limitations with that);
2. the facility of playing loud enough to be in an orchestra (some natural flutes do come close).

It also has several relative disadvantages:

1. it sounds metallic;
2. one needs to twist one's body, arms, and/or head into an off-balance position. The hand position has contributed to many cases of carpal tunnel syndrome;
3. on an open-holed flute, one can "half hole" or (depending on the quality of the flute) quarter hole or more or less by choice. Metal on/off keys do not give that potential.

4. I have played a metal concert flute, and find I cannot get anything close to the "bending" of notes that is possible on the shakuhachi by tilting the player's head or the flute.

Finding that I like being physically "centered," rather than twisted, while playing, and desiring to carry only one flute to play along with other musicians, I decided that a marriage of the two styles of flutes was in order.

I traded in my father's retired trumpet for a concert transverse flute and asked Terry Wedge, an Ontario bamboo flute maker, to replace the usual metal "head piece" with an end-blown mouthpiece. The result showed me it was possible.

Then I sent it all to Monty Levenson, master shakuhachi craftsman in northern California (www.shakuhachi.com). The refined hybrid that emerged, pictured here, has a more natural sound (to my ears), a louder sound, and the ability to play all "Western" scales while remaining centered. And it has the potential to bend notes by tilting one's head or the flute, as only a shakuhachi player can.

The photo speaks for itself as to the mechanics of the marriage, but I want to note the importance of a comfortable and individually appropriate placement of the thumb rest (similar to a clarinet).

I offer the idea to anyone who'd like to center while playing with the winds. It opens up a whole new range of comfort and sound for flute players. **we**



RON TREMBACK & PATTI ROBERTSON

Robbie Hanna Anderman, here with his hybrid flute, has been a musician for forty-five years, thirty-one of them on the shakuhachi. He is the only shakuhachi player in the Killaloe, Ontario area. While the shakuhachi is still his favorite flute, he sometimes yearns to play with other musicians on an equal tuning. Robbie plays shakuhachi on "Before the Moon Rose" (cassette \$10.50, CD \$17.50 postpaid from Monty H. Levenson, PO Box 294, Willits, CA 95490. 707/459-3402, www.shakuhachi.com).

Cheap Tools for Happy Bodies

Happy's Head Trip

\$17.50 (\$22 postpaid)

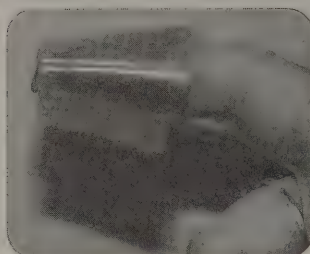
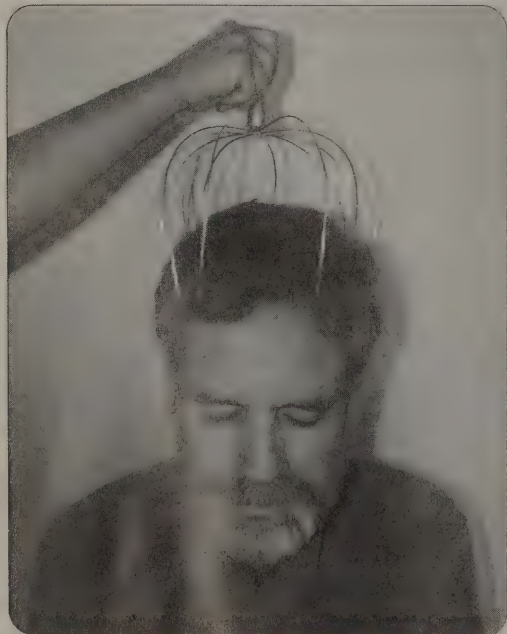
The Happy Company, 31055 Huntwood Avenue
Hayward, CA 94544, 510/476-5900
www.thehappycompany.com

Imagine a circle of fingertips starting at the crown of your head and slowly easing down to its base while applying the perfect amount of pressure. Blissful!

The Head Trip's ten legs, capped with little spheres, sprawl out into a circle that encompasses your head. You can adjust the tension by bending the legs into positions to suit your head. Legend has it that this bizarre and charmed contraption resembling something between a copper spider and a toilet plunger was the brainchild of an Aussie inventor who grew tired of scratching his wife's head.

I must confess that I don't know how the device impacts the pressure points and nerve endings on the head. I don't know if it eases headaches or helps to expel dandruff. All I know is that it makes your head tingle divinely and reminds you to breathe deeply. You can use it on yourself, but it's all the more pleasurable when someone does the tingling for you. I can't do this thing justice by trying to explain it—just trust me, it really is a head trip.

—Cherine Badawi



Ultralight Sports Toothbrush

\$3.29 (package of four; toothgel \$.41) at outdoor stores or from Securitas, Inc.,
1721 Summit Avenue
Richmond, VA 23230-4515. 800/705-4545
804/864-0967, www.ultralight-sport.com

When you pass 50 you start thinking about your teeth, if you have any left. Last issue I reviewed a wondrous oral hygiene machine that blasts plaque with a powerful but benign spray. It cost \$400 and weighed more than my overstuffed briefcase. If you can find a bigger "toothbrush" please tell me.

Now I'm back with the Ultralight Sports Toothbrush, 1.25 inches long, 1.33 grams heavy, made of "FDA approved material." If you can find a smaller toothbrush I'll eat it. The Ultralight fits on the end of your finger and is (presumably) designed for people traveling light. Really, really light. It works, sort of, but it wanted to slide around on my fingertip and I found I had to hold it in place with an adjoining finger. This is the perfect toothbrush to pack for a swim meet or a nudist convention. You can also buy a 2.5-oz. resealable packet of mint fluoride tooth gel to go with it.

—DB



Nukkles

\$16 a pair (\$19.95 postpaid)

Body Time Wellness, PO Box 9, Chester,
NJ 07930. 866/826-3984, 908/879-7762
www.bodytimewellness.com

Cup your hands, pointing down, mold some colorful plastic over four fingers, and you've got the basic idea for Nukkles, a massage tool so ridiculously simple that first I thought it really shouldn't work,—and then wondered why I hadn't thought of it myself because I could sell a bajillion of them.

I have a house full of massage tools and a wife congenitally dependent on backrubs. Unfortunately (she claims) her modest hand strength limits reciprocity. Maybe Nukkles will change that.

I don't think Nukkles will ever replace our \$150 vibrating "Thumper," but you can't carry Thumper in your pocket and the Nukkles only cost \$16 a pair. Not cheap for what amounts to a little Lexan, but worth it.

Ana and Olivia, aged 15 and 10, both liked the Nukkles a lot, although Olivia claimed at first that they tickled. Giggles turned to sighs as I followed the recommended circular pattern of massage. I got a 10-minute treatment from my weak-handed wife; well above the average duration. Since each Nukkle has four pressure points you can cover a lot of territory. And if you don't have a Nukkler handy you can self-administer most of your personal geography, including scalp, feet, calves, thighs and face. All of which feels good. The Nukkles are pliable enough to conform to body contours but I wish the Lexan was a little softer.

There's also a "Nuzzle" available for pets—basically a single Nukkle. Benga, the household cat, was immediately addicted. Benga, who is only slightly evil but very much aloof, sat still for at least 15 minutes of Nuzzling, which may be a personal record for humanoid contact.

—DB

Painted Shoes Manifesto

I have been thinking about small acts that can infect people with more goodwill, in response to the increasing conflict in the world. I remembered an ironic joke. You know how someone cuts you off in traffic and you lean on the horn, or even give them the finger? Have you ever thought that the person you encountered might do the same thing to another person, in traffic or elsewhere, and that the wave of bad vibes would propagate through the world? The punch line to the joke is "...and eventually it all ends up in the Middle East."

I was looking for something on the order of Anne Herbert's "Commit Random Acts of Kindness and Senseless Beauty," but I wanted something that could create a freemasonry of goodwill in which the people who follow these instructions become visible to one another.

Then I saw what was right in front of me—down at the bottom of my legs, actually. My shoes. In an instant, I knew what my destiny would be. The reason I've made it this far is to do this one thing, to move from being a painter of my own shoes to an evangelist of shoe-painting.

I've been painting my own shoes for seven years. I've traveled the world many times over in those shoes. They've never led me into trouble, and in general their effect upon the world has been positive. Most people don't notice. When you have flaming rocket ships on your shoes and most people don't notice, you wonder what else they don't notice. Customs inspectors never stopped me.

In seven years, the only time I encountered someone else wearing

painted shoes was on a railroad car between Cambridge and London. It was hard to tell how old she was because of the fluorescent spiked Mohawk and the safety-pin piercings. Despite her attire, she was shy. I understood. So am I! We knew it was impossible to not talk to each other. We used acrylics and were the only people we had ever met who painted their own shoes. We had the conversation that I've had with many others about the fact that there must be billions of shoes on Earth, and there can't be more than a dozen people who hand-paint their own shoes.

Paint your shoes! The act itself is great fun. You can be festive, gleeful, or ritualistic. It's entirely up to you! Like burning money, you get the adrenaline rush of transgressing a boundary, but *there's nothing wrong with painting your shoes*. The act is the opposite of antisocial, unless, of course, you paint generic insults. It means the wearer isn't afraid to be friendly toward strangers. And if there is one thing the world needs, it's more people being friendly toward strangers.

Paint your shoes! I buy a pair of black clogs every two years. A good pair costs around seventy-five dollars, and will work in barefoot-on-the-lawn weather and will work in rain and puddles. They only last two years if you wear them *all the time*. I mix good

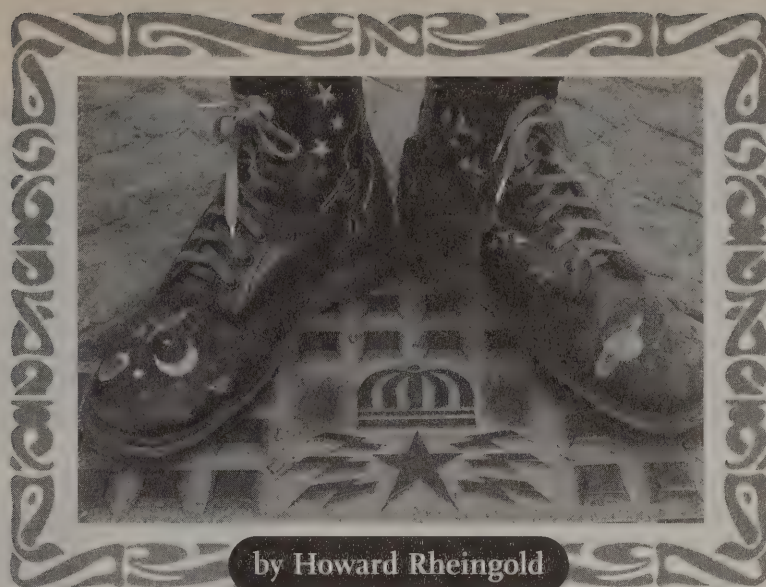
acrylic colors in paper cups, add just enough water to get the consistency I seek (thick but not gelatinous). You don't have to know how to draw a straight line. Use brush strokes if you want, or just splatter. Pour if that moves you. Fingerpainting is fine, but you have to wash the acrylics off your hands within minutes or they become difficult to get off. If you use every color you can imagine, as I do, the same shoes will match everything you wear. Or paint different shoes in different color schemes. Stencils are easy.

Paint your shoes! You will make people smile. You will liberate your creative spirit! You will signal that you aren't just a consumer of culture but a creator, a contributor in your own small way to the aesthetic public sphere! You'll have interesting conversations with people who don't paint their shoes but comment on yours, and think of the pun when two shoe painters meet! Painting shoes brings a little bit of good will into the world, and although it's a small thing, it becomes a large thing when enough people multiply it!

It makes *any statement* you want it to make, except: "I don't paint my shoes."

If you paint your shoes, send stories and pix!

Paint your shoes, improve the world! Pass it on! ☺



by Howard Rheingold

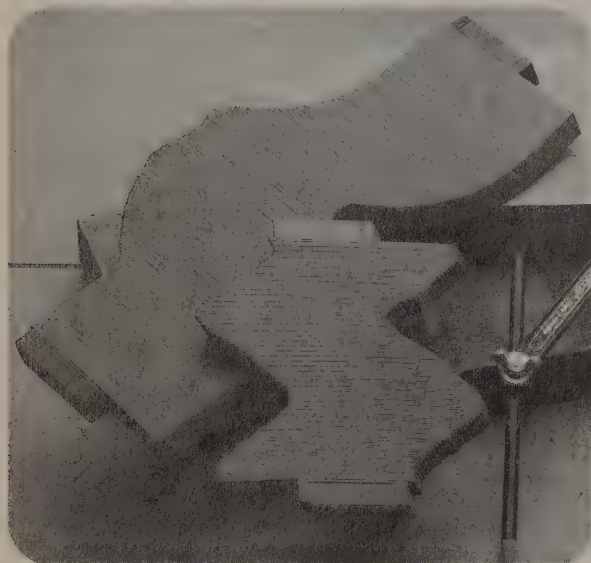
Howard Rheingold was editor of *Whole Earth Review* (1990–1994) and of the *Millennium Whole Earth Catalog*. His next book, *Smart Mobs: The Next Social Revolution*, will be published by Perseus in October 2002.

Fine Hand Tools . . . At Prices That Reflect Their Quality

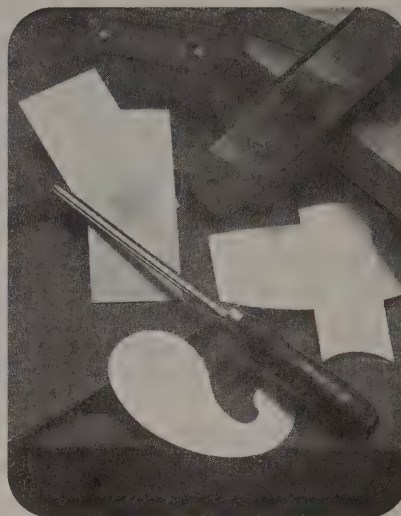
by Peter Warshall

Master builder and woodworker Roger Kent, a friend of thirty years who had just begun to review for us (*Whole Earth*, Winter 2001, p. 24), died this spring of metastatic melanoma. In grief, to be in his presence, and just to smell the smells of his super-skilled carpentry and carving, I cleaned his toolshed. I am no judge of his myriad chisels and planes, but, in homage, I offer some of his tools that I sat and contemplated, wishing he was still here to explain them. They're all available from GarrettWade, purveyor of quality professional tools.

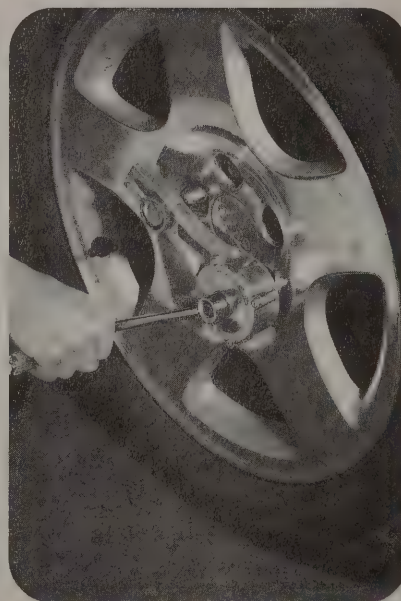
Photography by Dick Frank



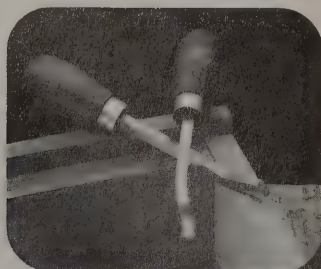
PROFILE TRACING GAUGES



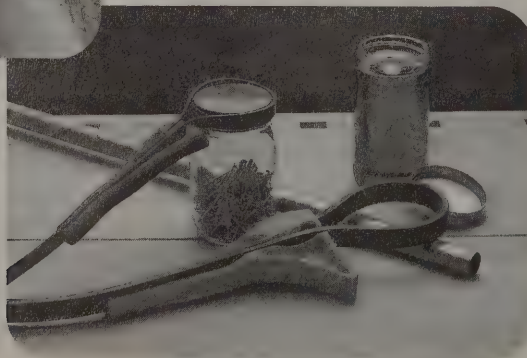
CURVED SCRAPER BLADES



GEARED LUG NUT REMOVER



CLEAN-OUT CHISELS



CONSTRUCTOR STRAP WRENCH

PROFILE TRACING GAUGES

5.5" \$17.50
12" \$29.50
18" \$43.50

I came across these weirdly shaped blue plastic thingamajigs, and later found what they were from the GarrettWade catalog. You push the gauge against any awkward shape, and its individually tensioned low-friction plastic blades conform to that shape. Then you take the gauge and copy the curves onto a new piece of wood. Great for tracing molding, etc. Roger had all three gauges; I will agree with GarrettWade, which says "these are the best."

CURVED SCRAPER BLADES

Set 3 curved/.4mm \$8.95
Set 3 curved/.6mm \$8.95
Scraper Blade Holder \$31.50

My friend Barney Burnes imports rough-hewn bowls made of beautiful Mexican woods carved by the Tarahumara Indians. Museum shops and ethnic stores won't accept them—too much flaking and splinters and gouge marks—so he spends hours sanding them for his Tarahumara friends. But here's the tool (another mystery in Roger's shed) to cut back on needing multiple grades of sandpaper and excessive elbow grease. These scrapers with convex and concave shapes are great smoothers of bowls and other wood hollows and domes. You need to wear gloves ('cause your fingers heat and tire) or buy the rather pricey blade holder.

BRASS BEVEL FINDER (NOT PICTURED)

\$7.95

Every chisel or plane blade has an ideal cutting edge. The bevel finder allows you to check the bevel angle and prevent taking off too much wood with the first pass. From 15° to 35° in 2.5° increments. Also, 45°, 60°, and 120°. English elegance.

CLEAN-OUT CHISELS

Pair (left and right) \$16.95

Roger used these odd-shaped chisels to clean up rough spots in his woodcarvings. But they're also incredibly useful when you need to make corners meet in repair jobs. Say your bookcase is collapsing from too many scholarly tomes. The corner angles are filled with old glue or rough saw-cut edges, chips, and splinters at the point where the two sides interlock. These clean-out chisels keep your knuckles from scraping, find the nooks and crannies with the crap you want out, and have a great design. Sold as pair, left and right bent. Three-inch-long blades. Great for dados (yes, the word's in your dictionary, which is now resting on that exquisitely repaired shelf).

My rummaging through the GarrettWade catalog, trying to identify Roger's tools, turned up the following. They were not in Roger's toolshed, but I know them well.

—PW

GEARED LUG NUT REMOVER

\$59.95

We were twenty-five miles from the nearest asphalt road, in a far corner of one of the barren parts of the Pinacate Mountains in Mexico, when our front tire blew. No biggie, until we realized that the shop guys had screwed the lug nuts down so hard with their no-sweat pneumatic wrenches that my wimpy spanner and all my strength were useless. As we were getting ready for the night walk through America's driest desert, a miracle arrived—an Antioch College desert explorers' bus. The driver was prepared and, by attaching his electric drill to the cigarette lighter, drilled off two lug nuts that had resisted even his gigantic spanner. Moral 1: Before an outback road trip, go to the shop, and have them loosen and then hand-tighten the lugs. Moral 2: Buy this tool with its 32:1 gear ratio (thirty times more strength). Moral 3: If you see a pretty girl (or more importantly an elderly couple), struggling from the repair shop's overtightened lugs, stop and show off the power of this high-class, high-price nut remover.

DRAFT GUARD (NOT PICTURED)

\$9.95

When working at *Whole Earth*, I rent a room in a houseboat. The houseboat creaks and twists with the tides and storms. The front door was never properly squared and centered, and fog and cold creep under the door, boosting electric bills from powering the only wall heater. This draft guard slips under the door and seals both sides. Up to 36" wide (you cut it to fit), with a removable fabric for washing. If you're out in any shed with an ill-fitted door, this is just the ticket. (Best for interior doors over smooth floors.)

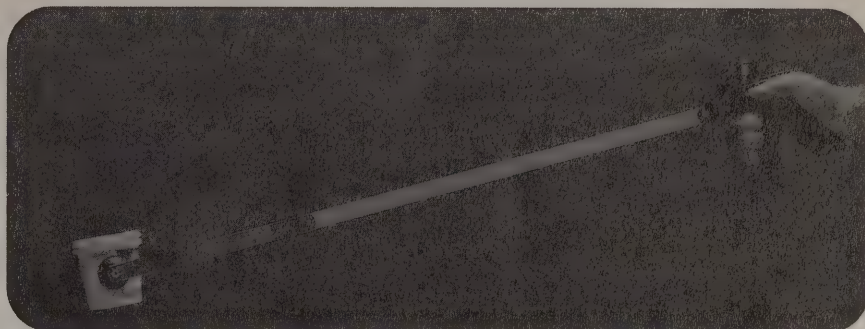
THE CONSTRICTOR STRAP WRENCH

Small strap wrench \$9.95

Large strap wrench \$19.95

Both at discount \$24.95

Around our kitchen, there is not too much gender bashing. But when it comes to the honey-jar top that is impossibly stuck or a new jar of pesto that has been banged on the counter and drowned in hot water and still won't open, then jokes about a peculiar emotional state called "jar envy" fill the room. Jar envy is the condition in which only a male can unscrew a jar top. But now the constrictor strap wrench can settle domestic tensions and avoid therapy costs. Powerful leverage overcomes delicate wrists (male or female). The small wrap fits 1/2" to 4" diameter jar tops, the large size 1" to 6.5".



BEST PICK-UP TOOL

BEST PICK-UP TOOL

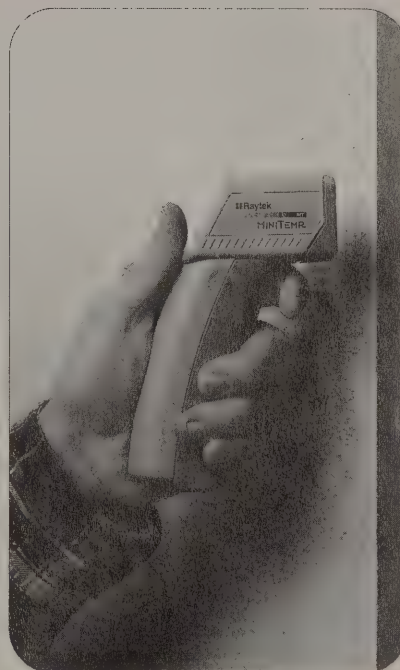
\$29.95

At 89 my mom has a very hard time bending. I once had a friend who was 5'4" tall, and married a woman who was 6'2". She always stored stuff on high shelves that he could not reach. Here is the best reaching tool for picking up a rubber band off the carpet or a dropped hammer or an object off a too-tall shelf. Used by the groundskeepers in Central Park. Maximum jaw opening is 3.5", with a maximum reach of 34", so it's not for picking up the bottle of Glenlivet hidden in the upper cabinet or beneath the bed.

NON-CONTACT THERMOMETER

\$99

Looking for an environmentally kosher job? How about joining the Amory Lovins Detective Agency and scouting windows and walls or whatever else for hot and cold spots? Without having to stick a thermometer in your home's ear, mouth, or other parts, you pull a trigger and read a non-contact temperature (from 0° to 500°F). It points out where cold is seeping through or where you might want more insulation. GarrettWade claims the thing can tell your barbecue grill temperature for the perfect steak or tofu burger. Given the price, I'd line up a few jobs on spec before buying one.



NON-CONTACT THERMOMETER



GarrettWade

Free catalog

161 Avenue of the Americas

New York, NY, 10013

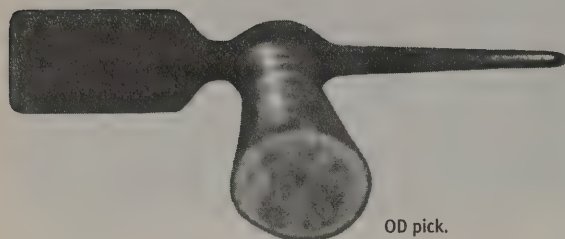
800/221-2942, 212/807-1155,

garrettwade.com

The mouth-watering catalog is great for browsing and for rousing your got-to-have-its, but the index isn't very detailed, and I found many specific tools easier to locate on the website.

—MKS

CRUCIAL TOOLS FOR TENDING THE LAND

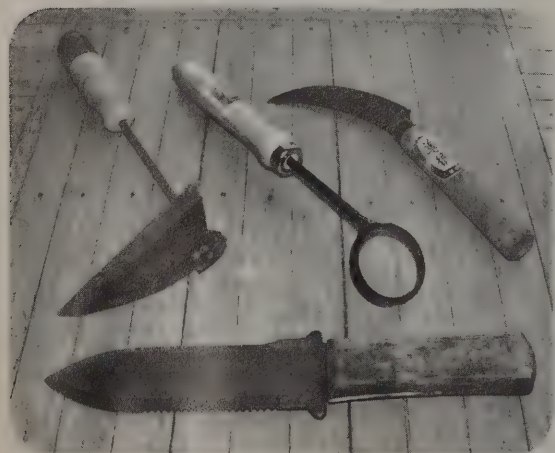


OD pick.

by David Guyer-Stevens

In my years living along the coastal ridges of California's redwood forest, I learned to clear out brush like a goat (see page 100—*Ed.*). Tending gardens and farms amongst such lushness, I was tested by tenacious Himalayan blackberry, sharp buckthorn, and deep rooted, heavy seeded, curly dock. But my ultimate taste of weed "management" was homesteading on the forested slopes of the Big Island of Hawai'i. The Scotch broom and ivy of California have bigger cousins among Hawai'i's alien invaders: Christmas berry (pepperberry), Hona Hona (Wandering Jew), and guinea grass. I depended on a sturdy cache of tools to get the job done. Mr. Natural's maxim, "The Right Tool for the Right Job," proves true.

To manage a garden or farm sustainably I strive to get the task done right the first time. Organic agriculture doesn't offer the slack provided by chemical or highly mechanical overkill, and so depends on good timing and good tools. Here are some of the crucial tools I wouldn't do without. I love finding ways to bring friendly garden tools to my agricultural work; on the other hand, tougher farm tools can sometimes make gardening more efficient or faster.



Clockwise from bottom: Hori Hori, Nejiri Gama weeder, 15" circlehoe, hand sickle.

As I squat, priming myself to tackle a weeding project, I look at it to see if it's going to call for some intense detail work of short-handled tools or the leverage and grace of the long handle.

If the weeds are high I often choose to cut the vegetative mass first and pick away at the roots on the second pass. Here I grab my **Japanese brush knife**, or branch sickle (by Sicket, \$38 from Farm and Garden Store). Its heavy metal blade is balanced to aid your efforts in making a solid cut. Its weight allows you to not bounce off your cutting subject (as happens with a machete). The blade is made of tempered steel that can hold a sharp edge. It's hooked so grasses and stems stay in the curve of your swing and lets you gather like a scythe as you cut. The 15" blade is mounted on a stocky wooden handle which permits you to choke up on it and swing single- or double-handed. In my subtropical days, I used this tool more than a machete.

When the job requires the blade of a machete, I swear by the Brazilian-made **Tramontina machete** (\$7.95 from Farm and Garden; Peaceful Valley Farm Supply). To bring down a large apple banana tree, the 22" **banana knife** (\$14.95 from Farm and Garden) was my tool of choice. It's a shorter version than the Hollywood style of machete—more accurate and efficient. In my current nursery work, I'm using a 15" blade.

When I have to stand up and face a large wall of guinea grass or Himalayan blackberry, I have to be ready for some hand-to-hand combat. If I am to clear a large space I love my **Shindaiwa weed whipper** (available at your local Shindaiwa dealer, approx. \$590 for the 35 cc). It comes in several sizes: the 28 cc version is fine for a homeowner. But anyone faced with maintaining acreage needs the 35 cc

or 45 cc model. These two can take the larger plastic string (.133). I jury-rig mine to use the largest size (.150) by boring the string head's hole with a drill. The larger the line the less frequently you need to change line. I am particularly fond of the three-pointed, star-shaped metal blade that can be used instead of string. The Stihl and Oregon brands of blades hold a good edge. Shindaiwa is superior in its shock absorption and harness designs. This workhorse of a tool is top of the line.

Once I have cleared out a swath to a future garden or path and I need to weed out the remains, I am glad I have my **Japanese mattock**. (\$18 for the head, fits a standard mattock handle; with handle, \$28 from Farm and Garden). I don't have much use for the standard 5-lb. head pick that's out there on the market. It can kill you if you need to use it for any extended period of time. The 2-1/2-lb. version is homeowner quality. We bent many last year maintaining a vineyard. I got one with a 3-lb. head in Hawai'i at Farm and Garden. It's more useful and friendly than the five-pounder, but I have yet to find on the mainland.

One of my favorite tools from my farming days on the Big Island is a miniature version of the mattock. The **OD pick** is shrunken only in size. It has the strength of a larger ditch digger, but it's made to swing as a short-handled tool. I was able to effectively remove clumps of weeds as tenacious as Job's Tears with this little giant. With its reinforced head and stout handle, it's very different from other hand picks—most bend and break when the going gets intense. One of the better points about this tool is that it is available in three sizes to accommodate small hands, but doesn't compromise strength or quality (1-1/2 lb., \$15.75;

HELP
KEEP THE
FIRES
BURNING.

GIVE
A
TAX-DEDUCTIBLE

GIFT
save
30%

OFF COVER PRICE
888.732.6739
www.wholeearth.com

Whole Earth

ACCESS TO TOOLS, IDEAS AND PRACTICES

Please detach your completed contribution form, fold it and tape edge before mailing.

Your credit card will be charged at our offices.
or,
you can mail a check to Whole Earth at the address on the other side.

Thank you kindly.
Your contribution is tax-deductible (IRS No. 94-214-7154)

FOLD HERE

Yes, I want to support Whole Earth to aid in its mission of spreading new ideas, paradigms, tools, and practices for future generations.

☐ \$50 ☐ \$75 ☐ \$100 ☐ \$250 ☐ \$500 ☐ \$1000 ☐ \$5000 ☐ Other

Payment Method

☐ Check (Payable to *Whole Earth*) or Charge my: ☐ VISA ☐ Mastercard

Account Number: _____

Expiration Date: _____

Signature: _____

Whole Earth

ACCESS TO TOOLS, IDEAS AND PRACTICES

SAVE 30% OFF THE COVER PRICE!

GET WHOLE EARTH FOR ONE YEAR (4 ISSUES) FOR ONLY \$20.00

Name _____

Address _____

City/State/Zip _____

Email _____

☒ Bill Me Later

☒ Payment enclosed

For new orders only.

Canada: US \$24 includes postage and GST. All other foreign countries: US \$27. Please allow 6 to 10 weeks for first issue.

3008S1



BUSINESS REPLY MAIL

First Class Mail, Permit No. 292, Denville, NJ

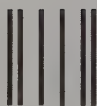
POSTAGE WILL BE PAID BY ADDRESSEE

Whole Earth

P.O. BOX 3000

DENVILLE, NJ 07834-9879

NO POSTAGE
NECESSARY IF
MAILED IN THE
UNITED STATES



BUSINESS REPLY MAIL

First Class Mail, Permit No. 292, Denville, NJ

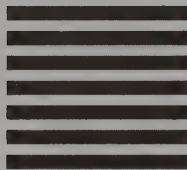
POSTAGE WILL BE PAID BY ADDRESSEE

Whole Earth

P.O. BOX 3000

DENVILLE, NJ 07834-9879

NO POSTAGE
NECESSARY IF
MAILED IN THE
UNITED STATES



HELP
KEEP THE
FIRES
BURNING.

GIVE
A
TAX-DEDUCTIBLE

GIFT

save
30%

OFF COVER PRICE

888.732.6739

www.wholeearth.com

3 lb., \$28; and 5 lb., \$34—weights refer to total tool weight, including the handle—from Farm and Garden).

I reach for a **hand sickle**, aka serrated sickle, (\$6.50 from Down to Earth; Farm and Garden) when I want to cover a lot of ground and cut rather than weed. It handles the duty for edge work or crude pruning. The end point of the curved blade gives me unequalled accuracy when cutting around existing plants. Some versions come with a 6" blade and 5" handle. The **grass sickle** comes in a larger model (\$19.95 from Peaceful Valley Farm Supply). It has an 8" blade with a 15" hardwood handle. A great extension of this concept is the **brush sickle** (\$37.65 from Peaceful Valley Farm Supply). Its 6" blade is hand-forged, laminated steel, and has a thicker, heavier handle for rougher work. This is like a short machete.


If a job requires more detail weeding, then I have the joy of using one of my perennial allies—the **Japanese Hori Hori** trowel (\$24.95 from Harmony Farm Supply; Peaceful Valley Farm Supply; and Farm and Garden). Again, it's a diminutive giant of a tool in its capacity to be a weeder, root cutter, pry tool, and trowel all in one. Its blade is 6.5" long with a steel shaft running through its 5" wooden handle. It's a sharper tool than other trowels and heavy-duty enough for serious action. It has a serrated edge for its root-cutting power. I wear one on my belt next to my clip-pers and feel naked without it.

Two new tools for close-in weeding have come into my tool bucket. The **Nejiri Gama weeder** (\$8.95 from Harmony Farm Supply; Down to Earth) is one of them. This well-angled tool feels like an extension of your hand when you pull its sharp blade over the garden bed's weeds. The blade is welded onto a 1/4" square

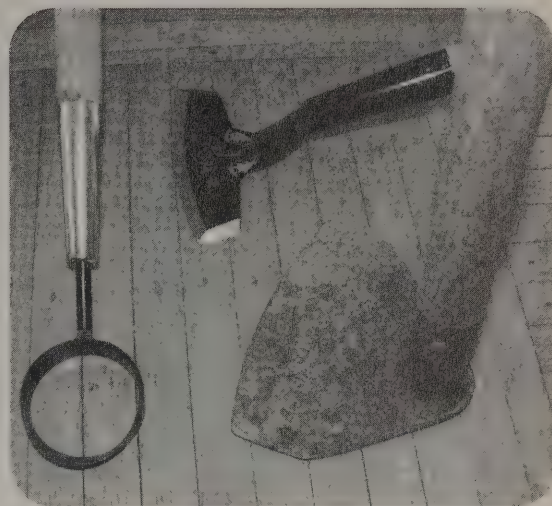
steel shaft that runs through the 4" wooden handle (10-1/2" overall); it weighs four pounds.

Another new choice for a precise weeder is the ingenious **circlehoe**. (\$14.95 from Harmony Farm Supply; Peaceful Valley Farm Supply). Coming out of freethinking Sebastopol, California, my new home, this is inventor Ralph Henningsen's answer to weed management. This wonderful tool has a circle head made of carbon steel alloy, forged and heat-treated, and mounted on ash handles.

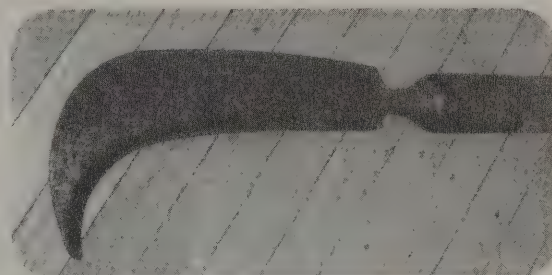
I quest for tools that I can use in both agriculture and horticulture. The circlehoe is a great example. For the task of clearing under fruit trees or around grapevines, the traditional choice has been the eye hoe. The heavy-bladed long handle allows a person with a strong back to cover a lot of row feet.

In my work last year in the vineyards and orchards of Sonoma County, I found a tool that made the work in the field faster than the old classic eye hoe: the **Rogue hoe** (\$24.95 from Harmony Farm Supply). Its head is made from tempered steel. The blade is knife-sharp and keeps its edge through most of the day. It comes with a two-year warranty. I chose the version with the 7" x 4" long head. It's designed for large weeds or primary tillage. Rogue makes two hoes I intend to try this summer for lighter work: the **Rogue garden hoe** and the **Rogue push hoe**, both 5.75" x 1.75" (\$24.59 each from Harmony Farm Supply). This family of hoes has opened a new chapter in heavy duty field crop management. 

David Guyer-Stevens has managed and designed organic farms and gardens all over the country, specializing in biodynamics. He is currently the organic grower for a wholesale nursery in Santa Rosa, California. See his reviews of farm manuals, *Whole Earth*, Spring 2002.



Long-handed weed hoes l to r: circlehoe, Rogue push hoe, Rogue field hoe.



Brush knife.

As I depend on the good tools in my tool shed, I depend on the following outlets.

—DGS

PEACEFUL VALLEY FARM SUPPLY
PO Box 2209
Grass Valley, CA 94945
888/784-1722
www.groworganic.com

HARMONY FARM SUPPLY
PO Box 460
Graton, CA 95444
707/823-9125

FARM AND GARDEN
PO Box 400
Captain Cook, HI 96704
808/323-3017

JOHNNY'S SELECTED SEEDS
184 Foss Hill Road
Albion, ME 04910-9731
207/437-4395
www.johnnyseeds.com

DOWN TO EARTH DISTRIBUTORS
(resale/wholesale only)
150 West 4th Avenue
Eugene, OR 97440
541/485-5932
800/234-5932
www.down-to-earth.com

BRANCHING OUT:

LIVING IN THE TREES

by Suki Casanave

The notion of building shelters in treetops is not new. Old engravings depict treetop dwellers in the South Pacific living in thatched nests, riding up and down in baskets. In New Guinea tree houses offered protection from enemy attack. Even today, some inhabitants of Irian Jaya, in the western part of New Guinea, live high above the forest floor in houses built of palm fronds.

But throughout history, tree houses have been inspired by more than necessity. People have long been inclined to build them simply because they are so much fun. Anthony Huxley's *Illustrated History of Gardening* notes that the Romans seem to have gone in for tree seats, and that, from the Middle Ages on, tree arbors were popular. One famous specimen, built into a giant lime tree in England, rose for three stories—leafy rooms of bent branches one on top of the other, “the goodliest spectacle mine eyes ever beheld for one tree to carry,” wrote John Parkinson in his *Paradisi in Sole* of 1629. Parkinson also marveled at the second floor, “wherein might bee placed halfe a hundred men at the least....” Apparently this tree house attracted royal attention. It is thought that Queen Elizabeth I herself once stopped for dinner in the second-floor banquet hall, joined perhaps by “halfe a hundred men.”

During the Italian Renaissance, the Medicis seem to have been driven by a sort of architectural family rivalry to see who could pack the most marble into a tree. One of their extravaganzas included a marble table, seats and fountains, and two marble stairways that spiraled up on opposite sides of the tree. This marvel was depicted in a seventeenth-century engraving by Stephano della Bella. In his travel writings of 1580, Montaigne recorded his visit to a Medici tree house.

In England, a half-timber cottage originally built in the late seventeenth century on the grounds of Pitchford Hall in Shropshire is still perched in the garden lime tree. A 13-year-old princess who grew up to be Queen Victoria visited this one-room Tudor tree house on October 28, 1832, noting the occasion in her journal: “At a little past one we came home and



Fall City Tree House.

walked about the grounds, and I went up a staircase to a little house in a tree.”

In France a chestnut-lined street in a town just west of Paris became known in the mid-nineteenth century for its arboreal restaurants. While musicians and dancers made merry on the ground, diners climbed into small gazebo-style dining rooms among the branches and were served elaborate meals, hauled up by means of ropes and pulleys. Advertising their “*Magnifique point de vue*,” those restaurants flourished for more than a century.

Two historic French tree houses still stand. Tiny twin chapels in the trunk of a venerable oak in Normandy have survived lightning, as well as the wrath of revolutionaries. In daily use for more than 300 years, the landmark rises from the churchyard in Allouville-Bellefosse. Though it’s lost many branches, the tree lives on, a topped with a cross.

Early in this century the American novelist Mary Austin secured her reputation as an eccentric when she constructed a rustic tree house among the gnarled pines in Carmel, California. Austin was visited in her “wick-i-up,” as she called it, by friends and fellow writers Robinson Jeffers and Jack London. A yellowed photograph in the Carmel library archives depicts Austin in her open-air writing room, pen in

continues on page 77



Tree house with skylight.

Around the time Julia Butterfly Hill was hunkering down in her now-famous tree house, I was staying in a tree house village in the tiny town of Olympus, Turkey. People from all over the world came to stay in the tree houses. Everybody, no matter their ages or where they were from, experienced the same wonder, fascination, and awe. At night we scrambled down from our perches, gathered around a bonfire, and shared tree house stories. Everybody had one. Interest spans the globe, and it is growing. There are more than nine thousand tree house links on the Web, and tree house resorts are sprouting up from Hawai'i to Scotland. For how-to books, see page 77.

—EP

OUT 'N' ABOUT TREESORT & TREEHOUSE INSTITUTE

300 Page Creek Road, Cave Junction, OR 97523. 800/200-5484 tre resort@treehouses.com

The starting place for tree house info. Provides classes on tree house engineering, construction, and design, as well as tree house tours and tree houses to rent.



HOME TREE HOME

This tree house has a temporary access door and a tree trunk as part of its interior, providing the house with a constant flow of interesting bug life.



TREEHOUSES: THE HOUSE THAT JACK BUILT

Geodesic dome inspired by *Dome Book* and *Dome Book 2* (themselves inspired by the *Whole Earth Catalog*).



Tree house by Pear Tree, Scotland.

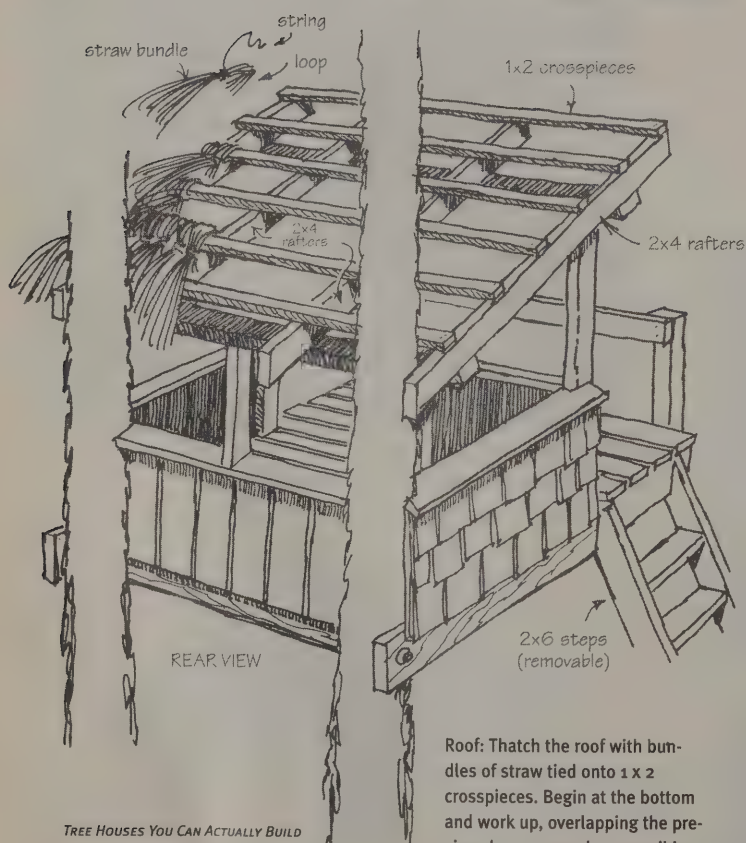
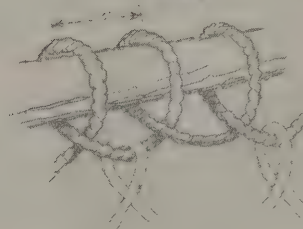
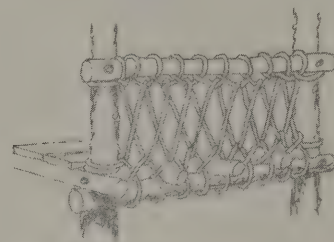




Tree house at the jungle's edge in Hana on Maui.



The "Dr. Seuss Tree House" has a crooked stovepipe chimney and a shed roof shingled with cedar shakes.



Roof: Thatch the roof with bundles of straw tied onto 1 x 2 crosspieces. Begin at the bottom and work up, overlapping the previous layer as much as possible.



More than 250 guests have stayed at the Woodpecker Hotel in Sweden. They are helped up and down with a rope harness.

hand, pine tree at her back. She spent mornings there, according to local lore, reviewing proofs of her work.

Some of history's most memorable tree houses exist only in the imagination. Dutch artist Hieronymous Bosch's "Tree-man" from his triptych *The Garden of Earthly Delights* depicts a sort of surreal tree-house-from-hell peopled with strange half-human creatures. In A. A. Milne's *Hundred Acre Wood*, Owl's tree house, which boasts both a knocker and a bellpull, is the site of frequent visits from Pooh and other forest friends. Nowadays many newspaper readers across the country keep tabs on the treetop world of Shoe, a comic strip character created by Pulitzer prize-winning cartoonist Jeff MacNelly.

The most famous tree house of all time, designed by writer Johann David Wyss, was home to the Swiss Family Robinson. Literature's shipwrecked clan lives happily ever after at

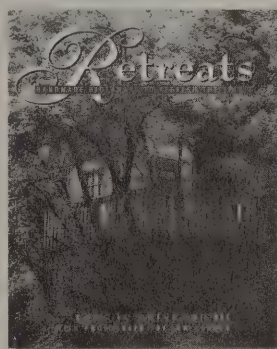
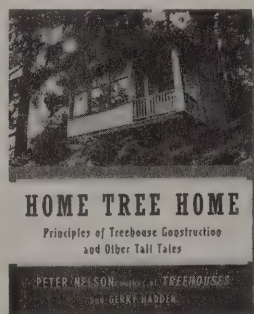
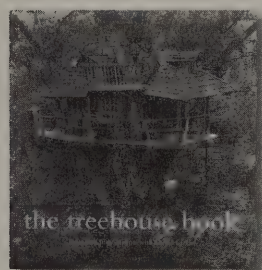
Falconhurst, high in a mangrove tree. The Disneyland version of this treetop address is perched in a 150-ton *Disneydendron semperflorens grandis* in Anaheim, California. The "everbloom-ing Disney tree" is constructed of 110 cubic yards of concrete and six tons of reinforced steel. In keeping with the novel, a water wheel at the base of the tree sends water to the rooms overhead, carrying more than 200 gallons per hour in bamboo buckets.

For geologists Judy and Campbell Bridges, who have conventional homes in Nairobi and Virginia, it was the marching, munching ants that inspired their tree house. "It took them more than an hour to pass our tent," says Judy, recalling a night in the wilds of Kenya surrounded by marauding siafu. The stinging ants are known to eat everything in their path. "You could hear them the whole time," she says. "Suddenly a tree house seemed like a really good idea."

The lion experience clinched it. "He was roaring a foot from our tent," remembers Judy, "trying to flush us out. We were hidden, thank goodness, so he didn't realize he could get at us with a swipe of his paw."

Some tree houses are becoming legendary. Like the saga of Bob Redman who managed in the 1980s to build twelve different tree houses in New York City's Central Park before authorities finally tracked him down. And then there's the famous elevator tree house, designed by a 70-year-old New Jersey man who was wary of climbing the 80-foot oak in his back yard. He built his tree house to rest on the ground. On nights when he hankered to enjoy a view, he just stepped inside and pumped the foot pedals. Lift off! In a few seconds he was high enough to enjoy a panoramic vista of city lights winking below. **WE**

EXCERPTED WITH PERMISSION FROM SMITHSONIAN MAGAZINE, AUGUST 1997.



THE TREEHOUSE BOOK
Peter Nelson, Judy Nelson,
Paul Rocheleau
2000; 224 pp. \$25
Universe Pub.

HOME TREE HOME
Principles of Treehouse Construction
and Other Tall Tales
Peter Nelson and Gerry Hadden
1997; 179 pp. \$17.95
Penguin Books

RETREATS
Handmade Hideaways
to Refresh the Spirit
G. Lawson Drinkard III
1997; 155 pp. \$39.95
Gibbs Smith

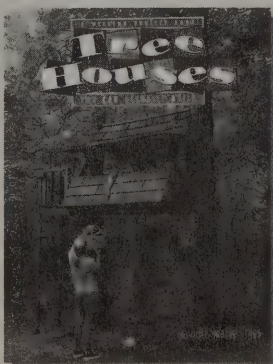
TREEHOUSES
The Art and Craft of Living
Out on a Limb
Peter Nelson, David Larkin, eds.
1994; 128 pp. \$21
Mariner Books

**TREE HOUSES YOU CAN
ACTUALLY BUILD**
David and Jeanie Stiles
1998; 128 pp. \$18
Houghton Mifflin

TREEHOUSES
The House That Jack Built
David Pearson
2001; 95 pp. \$16.95
Chelsea Green

These are the best books for building tree houses, from playhouses for children to treetop vacation homes to private skyward offices. All except *Retreats* (which also covers cabins, yurts, and other dwellings) are illustrated with build-it-yourself drawings and colorful photos. Many contain stories of the creative, if not eccentric, people who occupy the houses.

—EP



Traveling with Eyes Wide Open

Traveling Light

New Paths for International Tourism

Lisa Mastry

2001; 88 pp.

\$5 downloadable or by mail (\$9 postpaid)

Worldwatch Institute,

1776 Massachusetts Avenue NW

Washington, DC 20036

www.worldwatch.org

Making the World Safe for Tourism

Patricia Goldstone

2001; 272 pp.

\$30

Yale University Press

These recent reports (both, unfortunately, lacking indexes) advance the critique of tourism well beyond the early plague-on-all-your-houses work of Louis Turner and John Ash in The Golden Hordes (1975) and Deborah McLaren in Rethinking Tourism and Ecotourism (1997; Whole Earth, Summer 1998). New data indicate that the critiques are having an effect, and that the best of locally driven initiatives can counterbalance some of the worst impacts of global tourism.

Lisa Mastry finds that tourism is one of the few points of entry into the global economy for the world's so-called least developed countries, one of the few sectors where these countries consistently run a trade surplus.

Foreign-based operators still dominate, and even ecotourism can lead to "green-washing" that creates the impression, without the reality, of environmental concern. Still, Mastry identifies positive steps by governments and the tourist industry (often because of tourist demands). She offers concrete recommendations for regulations, policies, and programs.

Patricia Goldstone concentrates on tourism as an instrument of foreign policy, entangled with development and foreign-exchange policies promulgated by the World Bank and IMF. She looks at tourism as an adjunct to the peace process in Northern Ireland, the Middle East, and the Balkans, among others, while asking whether the desires of businesses and governments to create tourist-friendly destinations promote peace or provide excuses for social repression. Her first-rate personal journalism rings with authenticity.

She suggests that when everything from whoring to house décor is influenced by tourism, then local initiatives may find fuller public engagement than was possible only a few years ago.

—Herb Hiller

"Over the past few decades, non-governmental players—including citizen groups, grassroots activists, and tourists themselves—have generated much of the pressure for more sustainable tourism. Local involvement can spell the difference between positive and negative tourism



developments. "Destinations often attract the tourists they deserve," says Robyn Bushell, professor of tourism at the University of Western Sydney. "If locals aren't proud and active, and businesses aren't required by local governments to value a place, then neither will the visitors. —TRAVELING LIGHT

"Two depressed-looking, clean-shaven men with the greenish skin that comes from spending a lot of time in rooms with no windows are waiting to interview me when I finish speaking with the minister. They claim to be journalists but do not ask the kinds of questions that journalists ask, and I wonder whether they are members of the Syrian secret police. One of them laughs and says, 'That's a good one,' when I tell him my book is about tourism as a foreign-policy tool. They want to know what my politics are and what I think will happen now that Ehud Barak is prime minister of Israel. 'I don't know,' I say, and take both their hands in mine. 'I hope it turns out well for you.' They stare at their hands as if they've been burned....I am good for business and am allowed to pass.

—MAKING THE WORLD SAFE FOR TOURISM

Infiltration

the zine about going places you're not supposed to go

Published occasionally. "Published issues (1-17) are available for \$2 cash each (US or Cnd., postpaid). You can pick up the entire bundle for \$32. Please do not send cheques or money orders; well-concealed cash will make it through the mail just fine." PO Box 13, Station E, Toronto, ON M6H 4E1 Canada. www.infiltration.org/zine.htm

This paper zine and website are "devoted to the art of urban exploration," with instructions, tips, maps, diagrams, and sagas of journeys to the nonpublic parts of cities: catacombs, utility tunnels, hospital innards, abandoned sites, the outsides of tall buildings. Toronto, Infiltration's home, is explored most thoroughly, but readers also contribute stories of unauthorized explorations of New York, Paris, Wellington, Rotterdam, and other outposts for city-bound adventurers.

—MKS

"Only a very small percentage of those who venture into drains and catacombs ever have any dealings with the authorities, but it does happen, particularly to people who insist on being noisy and like to pop out of manholes near busy intersections. In some cases, you'll be able to talk your way out of it, if you can convince the authorities (police/municipal workers/whatever) that you didn't damage or deface anything and that you thought drains were public property (which, indeed, they are).

LEFT: TRIPOLI, FROM MAKING THE WORLD SAFE FOR TOURISM

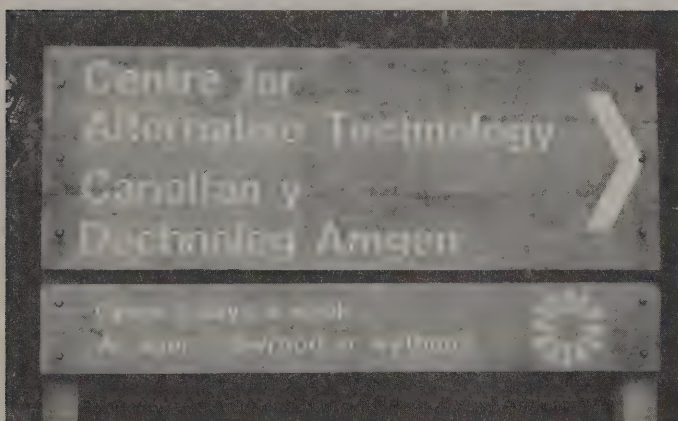


SONGS OF Experience

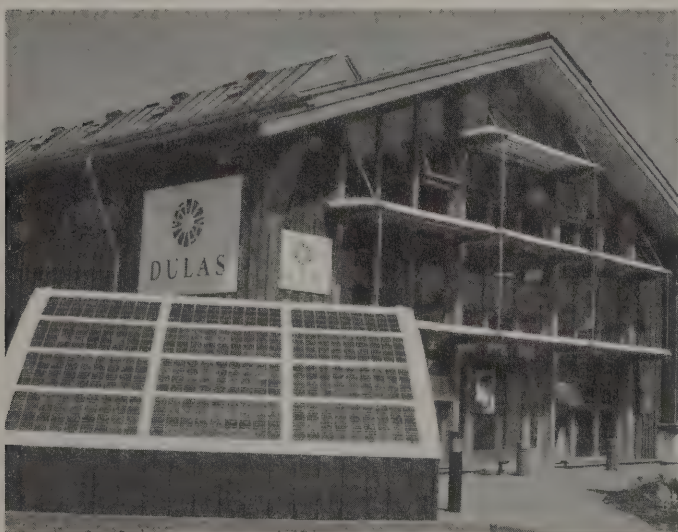
by Peter Harper

Does Sustainability Really Work?

Three decades of successes, failures, and change at Wales's Centre For Alternative Technology



ALL PHOTOS COURTESY OF CAT



CAT Visitor Centre.

In 1974 a group of young, (mostly) British idealists took over a derelict slate quarry in Mid Wales. The site covered about forty acres, mostly precipitous slate tip, with about ten acres of usable flat land. "The hippies," as the locals called them, hoped to create a sustainable community to test and demonstrate emerging technologies and lifestyles that could provide solutions to worldwide environmental and social problems.

Today, the Centre for Alternative Technology (CAT) operates as a cooperative with about eighty-five full-time staff members (more than a hundred during the summer) pursuing

an array of research, publishing, educational, and consulting ventures, while hosting 80,000 visitors a year.

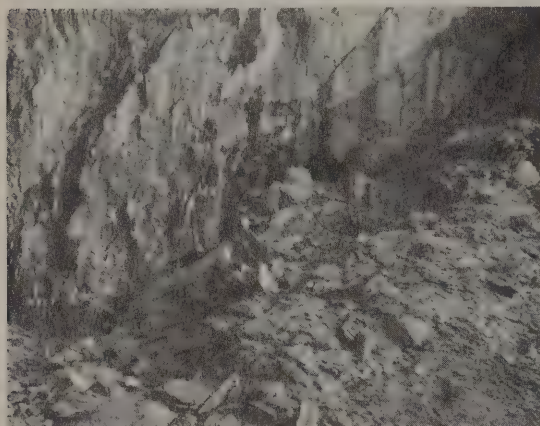
Peter Harper, CAT's director of research and a staff member since 1983, reflects here on CAT's evolution. We were struck by his candor about CAT's failures as well as successes, and the need to rethink assumptions when the ideal and the practical collide. Earlier versions of parts of this article appeared in *Annals of Earth* and the Japanese magazine *BIO-City*. Thanks to David Kupfer for suggesting that Peter send us this story.

—MKS

How nice it is to be able to combine two of my enthusiasms, *Whole Earth* and CAT. I've been working at CAT for nearly twenty years and subscribing to *Whole Earth* in its various incarnations for even longer.

The trouble with CAT is that it's so damn complicated. Is it essentially a model sustainable enterprise? A museum of eco-gadgets? A showcase for natural landscaping? An against-the-odds tourist attraction? An idealistic working community? A hands-on training centre? A high-octane eco-salon? The sunlit destination for pilgrimages? Paradoxically there is no "centre": no definitive activity, no charismatic guru, no snappy slogan that crystallises its *raison d'être*. It is complex and distributed, and cannot be taken in at a glance.

Perhaps one of the most useful things CAT has to offer is experience. It has tried so many things, and sorted much wheat from chaff. By passing on its stories, perhaps we can help others avoid the reinvention of many wheels.



Humble beginnings: the slate quarry.

I coined the term (in a bar in London) in the early seventies, before CAT's founding. The expression (usually abbreviated simply as "AT") was intended to bridge the gulf between the technomaniac mainstream and the charming but ineffectual antitechnological counterculture. It was supposed to be critical of mainstream science and technology, applying "alternative" values while retaining their honest open-endedness and the indispensable utility of their results. At the same time it would bring numeracy, clarity, and can-do skill to the dreamy alternative world, always in danger of losing touch with physical reality. In short, it was intended to unite the best of both worlds.

The word "alternative" was also supposed to signify a much wider brief than the mechanical hardware usually implied by the word "technology." Thus it covered the living world too—agriculture, gardening, medicine, waste treatment, forestry, diet. Nor did it stop there, but went on to lifestyles, skills, organisational patterns, education...in fact it was (and is) hard to see any limit to its scope. This is logical and necessary because sustainable systems are just that—systems; rarely discrete gadgets but godawful mixtures of hardware, software, organisation, and human intelligence. This makes AT virtually identical in intent with other holistic approaches such as permaculture and ecological design. They all tend to end up in the same place.

To make sense of CAT's activities and evolution, and allow others to make comparisons, I think it is helpful to review what has really worked, and contrast this with a frank assessment of what failed, then review what has changed in the course of a generation. (Much has.)

WHAT WORKED FOR US?

Successes fall into three categories:

- the technology of sustainability;
- our democratic group process;
- marrying economics with our wider goals.

The technology

In spite of many false starts and failures, the basic technologies of reducing environmental impact without undue loss of amenity really can work, although in conventional economic terms they are sometimes rather expensive.

Renewable electricity supply: This is based on wind, water, and sun with a diesel fuel backup, giving CAT 80-percent renewable electricity and excellent reliability. There is also a connection to the grid for further backup or selling surpluses.

Renewable heating systems: These use sun and woodfuel, plus a small amount of wind electricity. They supply about 70 percent of the demand for both space heating and hot water. Liquid propane gas is our conventional backup fuel.

Ecological building: We design for environmentally sound materials and very low energy consumption, down to 10 percent of typical levels over the lifetime of a building. Favoured materials are wood, earth, straw, slate, stone, paper, wool, and lime.

Biological waste treatment: we treat all solid and liquid waste, with 80-percent nutrient retention, using a combination of composting, special toilet designs, and aquatic plant treatment systems.

Onsite water supply: we have no mains connection. Water for all purposes—hydropower, irrigation, washing, and drinking—is provided from

a stream-fed reservoir above the site, inherited from the nineteenth-century slate workings. We clean drinking water by sand filters and ultraviolet treatment.

Sustainable land use: no agrochemicals have been used on the site for twenty-eight years, and other toxic materials are avoided. Opportunities for adventitious habitat creation have been widely accepted. The net result is a far higher biological diversity than the surrounding farmland, in spite of rapid development and intense human activity on the CAT site.

The organisation

On the organisational side, CAT's structure has evolved gradually with the general aim of balancing efficiency and participation. With high levels of participation and transparency, and a flat wage structure, our staff members become and remain very loyal to the organisation. It is owned by its permanent members, who also constitute the responsible management.

Most decisions are made by consensus, with provision for voting by secret ballot if absolutely necessary. This has only been invoked three times.

Management is largely decentralised to individuals and departments, with an elected coordinating group whose members serve for eighteen months in rotation.

Wage differentials are very narrow, maximum 1:1.5. All permanent staff members receive equal wages—£13,000 a year [US\$19,000], not much even by British standards—irrespective of jobs, qualifications, or lengths of service. These arrangements are reviewed from time to time, but have stood for many years.

Marrying economics with our wider goals

We have tried to develop activities that simultaneously communicate our messages and provide an income. For example:

- a visitor demonstration centre with 80,000 day-visitors a year;

- innovative residential courses on a wide range of “green” subjects, at various levels, for up to forty people at a time;

- an information service, available free to inquirers via post, phone, email, or in person, funded by grants;

- a consultancy service to advise clients on practical aspects of sustainability. Most of our work concerns eco-buildings, renewable energy, organic waste treatment, and ecotourism;

- publications focussing on detailed information and practical solutions: 100 titles currently in print;

- research into various aspects of sustainability, chosen on the basis of what is not being done elsewhere, and funded by special grants or other sources (we have tried to focus on problems of householders rather than commercial operations, choosing topics that need work but are being neglected by the big players);

- a shop and mail order service for a wide range of green books and products;

As a result of all this, the organisation has not only survived but grown, with an annual turnover of nearly US\$5 million. Sources of income break down like this: 50 percent trading activities, 15 percent entrance fees, 15 percent courses, 10 percent grants and donations, 10 percent miscellaneous and incomprehensible accountants’ statistics. CAT is by far the largest enterprise in the area.

We have “spun off” several daughter companies, including Aber Instruments, which makes electronic equipment, on the science park in Aberystwyth, the university town about twenty miles away; Dulas Engineering, specialising in technology for developing countries, mostly remote energy systems; and Ecogen, which installs wind farms, and has about 150MW under its belt. Some units remain subsidiaries of CAT: a café and a whole foods shop in town, CAT Publications, and CATEnergy Ltd., which runs the 600kW wind turbine whose output feeds directly into the grid. Numerous other enterprises

and activities in the area almost certainly would not exist but for the historical presence of CAT. It is also a model for a whole class of enterprises that we might call environmental visitor centres, or eco-centres.

CAT has done all this by steady organic growth from very modest beginnings.

WHERE HAVE WE FAILED?

In contrast to many positive achievements, the following areas have given us more problems:

Communal life: This has declined steadily over the years, to the extent that “ecovillage” is no longer an accurate description. There is little interest in classical communitarian living, and most of the eighty to ninety staff members now live off the site in conventional nuclear family units. Those that remain on the site tend to regard it as little more than a convenient housing development.

Transport: There are a lot of cars in the car park, and not as many bikes in the shed. There is no company policy and no encouragement for greener commuting. We are only now beginning to address this issue.

General eco-hypocrisy: do we always use organic vegetables, eco-cleaners and paints, and other low-impact materials—often at twice the price and half the performance, as we urge others to do? Sometimes, but very often we do not, except if someone else is paying.

Local affairs: our global perspective means we tend to ignore local matters and have often been at odds with some parts of the local population. This is improving, but remains an occasional headache (see box).

Maintenance: The place always looks scruffy. We are good at initiating things, not so good at maintaining them. We fail to notice dirt and disorder. This ingrained cultural feature will probably be the hardest of all problems to solve.

People care: individually there’s a lot of solidarity and affection, but we have not institutionalised it very well.



CAT makes ecological learning fun at its visitor centre.

Because the staff is recruited nationally from all over Britain, sheer population statistics (England 48 million, Wales 3 million) make most of the staff English, and urban English at that. Here springs a dilemma, because cultural diversity is a strong element in the wider green credo, and we all support the distinct identity of the Welsh language and culture. Yet societies based on land and kinship are totally alien to us, and just by being here—it takes no more than that—we hasten the decline of traditions that go back thousands of years.

As the organisation grows, it attracts more outsiders with alien ways and they buy or rent houses and farms, open strange shops, take over influential committees, lobby for changes in the by-laws, criticise the teaching methods in schools, and generally dilute or corrupt the accepted customs and ways of doing things. They see themselves as bringing progress and enlightenment, but hardly notice the effect all this is having, because the local community is culturally invisible to those who don’t know how to read it.

Eventually, after decades, an accommodation evolves. The Centre, although still known in some pubs as “the hippies,” is obviously here to stay. Children go to local schools, become acculturated in their turn and speak Welsh. Welsh is jaw-breakingly difficult, and it is still a source of wonder to me, to hear my children—who at home speak in standard “BBC” English—break mid-sentence into *yr hen iaith*—the old tongue—with gestures to match.



A royal visitor.

Sometimes "the organisation" feels alien and has a cumbersome, bureaucratic feel to it, and there are always places where the shoe pinches. It is hard to judge whether we should really have done better in this regard; probably.

Finances and fundraising: although we're still here, it's always a struggle, and we always seem to be broke. We note with envy many of our European sister organisations financed by generous grants from their governments. We know this is a double-edged sword, and that it's better to stand on your own feet, but we do get frustrated with the lack of resources.

Accurate eco-auditing: This should be automatic in an organisation like ours. But it isn't. Progress rumbles on with rough-and-ready assessments, but in spite of our avowed purpose we are not always sure whether our policies and practices are valid, or even moving in the right direction.

HOW HAVE WE CHANGED?

One may well ask why we have succeeded so well in some areas and failed

so dismally in others. New organisations setting out on the same path should ponder this list that follows and ask whether they can save a lot of time by not having to relive the seventies! Most of the changes are in outlook or philosophy. We have tried to keep up with the times if it seems right to do so, and not remain in a conceptual ghetto.

- We like to think we have escaped from primitive environmentalism by now, having winnowed the really useful from the merely idealistic. What was meant by "alternative" in the early days was never very clear, a dizzying mishmash of ecological, political, and personal concerns which at the time were hard to separate.

- We take a much longer view now. In the early days I remember thinking we had perhaps five or ten years to Save the Planet. We were in such a panic! Twenty-eight years later things remain urgent but we realise they cannot be changed overnight. Now we're thinking in terms of fifty or a hundred years.

- Paradoxically, in spite of our sense of urgency, ethical niceties dominated day-to-day proceedings in the seventies in a way we would find hard to credit now: We insisted that all tasks should be rotated; all decisions should be taken collectively; the staff gender-ratio must remain balanced; wages should be based on needs; only hand tools should be used; we should try to be self-sufficient and independent of the wider world; money should not be accepted from private enterprises; no goods from South Africa, Israel, etc.

None of these is strictly about sustainability or the environment, but they were part of the purist, romantic, anti-authoritarian ethos of the time. In the real world, sadly, we could not take all this on board and still fulfil the fundamental purposes of the organisation. So

one by one, with much mooing, many holy cows were put out to grass. There's more give-and-take now.

- Once we thought that modern society was terminally corrupt and we should have nothing to do with it. Now we see ourselves as inevitably part of both British and global society and want to participate in and change them. We have moved from withdrawal to engagement, and regard self-sufficiency as merely a quaint hobby.

- As a corollary to this, we have accepted that we are modern people. We somehow have to achieve sustainability, but we do not want to be peasants, and there will be no "going back." Once upon a time we thought the future lay in a sophisticated kind of neoprimitivism. No longer.

- We also accept that most of the action is going to be in the cities, where most people will be living and where, contrary to our original arcadian assumptions, sustainable modern lifestyles are more easily achieved. Farming, as always, will have a crucial part to play, but will not figure prominently in most people's lives.

- Many famous ecotechniques turn out to be ineffective in practice (e.g., household-waste methane generation for biofuel) while others that seemed dull and ordinary really deliver the goods (e.g., insulation; even switching from coal to gas). Technologically, it is important not to be deceived by appearances.

- We recognise now that collective, shared, large-scale systems are sometimes the right solution and give the best ecological answers. Small is not always beautiful. It may well be the first thing to try, but don't apply it dogmatically.

- There is no substitute for measurement and numerical accuracy. Without it you can easily be wrong by a factor of 10 or even 100 and be going precisely in the wrong direction. You must do the numbers.

- We have learned that reality does not necessarily speak for itself. At the beginning we thought people would come along, look at our work and say,

"Wow, that's fantastic! I'm going to do it too!" No. They don't. They usually get the wrong end of the stick. Ideas, principles, structures, equipment, all have to be presented in the right way both to command attention and induce understanding. Effective presentation is vital.

- A favourite idea of the sixties and seventies was that knowledge and skill could and should be shared: in principle anybody in an organisation could undertake any task. Therefore rotation of tasks was feasible, and would prevent a status hierarchy developing on the basis of specialised roles.

Tested in the real world, this idea quickly runs into trouble. It neglects the fact that although the rudiments of a task can be picked up quite soon, skills take time to develop, and the process is inhibited by too many job changes, compulsory task rotations, or rapid staff turnover. This isn't a computer game: we all have livings to make and organisations to run, in real time.

So at the Centre, although some basic tasks are still rotated, staff members tend to be highly specialised and for the most part stay that way, operating in departmental groups (garden, engineering, office, building, education, catering, information, publications, etc.). The moral of this tale: Skills are precious, and organisations should take care to nurture them.

- Consensus-based decision-making by the whole group is inefficient and soon becomes tiresome. We now accept the necessity of a fairly elaborate bureaucracy, decentralised decision-making, and in particular an elected management team to deal with the larger issues.

- In earlier days we thought we had all the answers. Now we know this is false, and that we must play our part in the wider sustainability movement. We should do what we are best placed to do, and let others do what they do best. Therefore we need to keep a critical weather eye on who else is doing what.

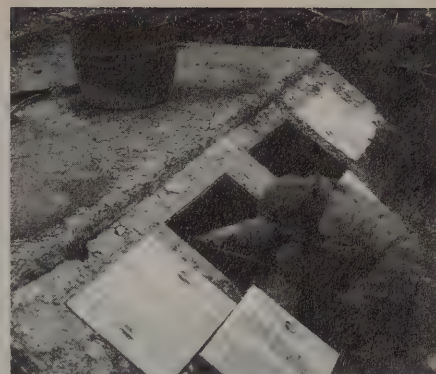
- We have increased our conformity with prevailing professional and legislative norms. Management bureaucracy is stricter and better observed, and health and safety consciousness is much

improved. Some of the old lags, however (mea culpa!) find it harder to cope with the changes!

Perhaps this final list reveals us to be ageing bourgeois greenies who have acquired a stake in mainstream society and don't wish to rock the boat too much. But perhaps we have a role to play as a source of reliable information, and a bridge between the mainstream and the more radical parts of our movement. Sustainable systems are invariably mixtures of hardware and software, and centres like ours, unafraid of asking difficult questions, will be the laboratories of techno-social innovation that we need so urgently for our voyage into the future.

Centre for Alternative Technology

£16 [US\$23.35] annual membership includes subscription to quarterly *Clean Slate: The Practical Journal of Sustainable Living*
 Centre for Alternative Technology
 Machynlleth, Powys, SY20 9AZ Wales
 +44 (0)1654 705950, www.cat.org.uk



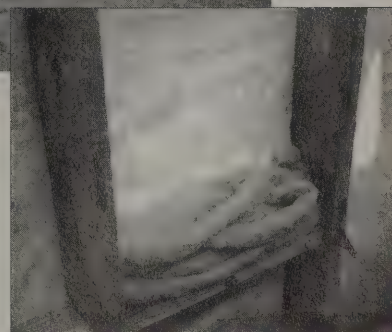
Composting toilet.



Aqua culture.



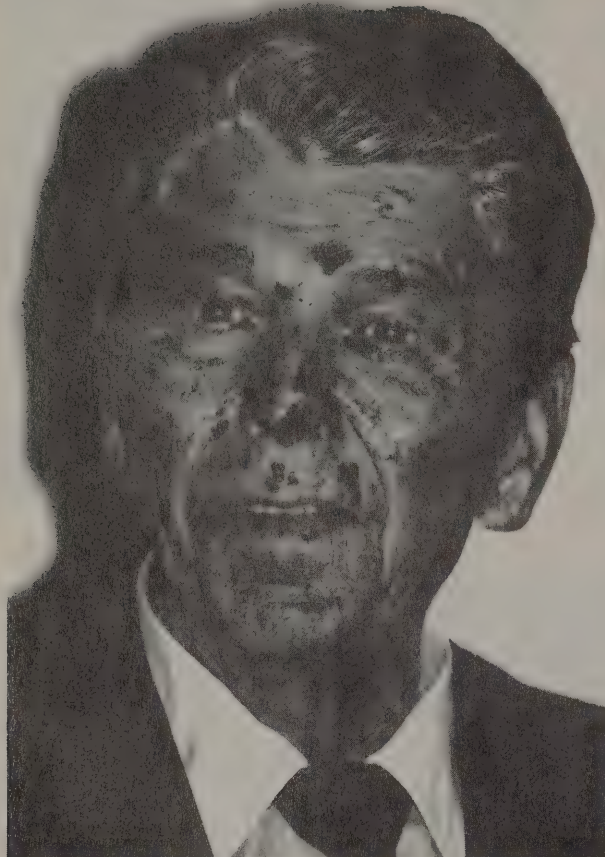
Above and right: wool insulation for rammed earth buildings



"Field" education at CAT's visitor centre.

Insane, Inspired, and Beautiful Stuff

The Design Work of Tibor Kalman



COLORS

Colors

Maira Kalman and
Ruth Peltason, eds.
2002; 224 pp. \$35
Harry N. Abrams

(Un)fashion

Tibor Kalman and Maira Kalman
2000; 224 pp. \$30
Harry N. Abrams

Left: *Colors* 7, whose theme was AIDS, featured this picture along with a mock eulogy describing how then-President Reagan, before dying of AIDS in 1986, had nationalized the condom industry, ordered compulsory sex and AIDS education in all schools, funded AIDS-prevention projects worldwide, and diverted nearly half the US defense budget to AIDS research and education.

We've long admired *Colors*, the bilingual "magazine about the rest of the world" published in Italy by Benetton (reviewed in *Whole Earth*, Spring 1998). Its images of fashions, desires, ways to make it through the day, cultural obsessions, and material life among the world's people—rich, poor, familiar, or usually invisible—are stunning. Juxtapositions can be heartwarming or heartbreaking, hilarious or infuriating. It's presented without editorializing or preaching, forcing readers to decide what to make of it all.

Colors was born in 1991, when Benetton asked Tibor Kalman to design a magazine for them. "Not just design," he answered. "No. Create, edit, and design. Yes." Over six years, Kalman created thirteen issues—themes included race, ecology, religion, AIDS, shopping, sports, travel, heaven—that advanced his social activist politics through wit, subversion, and beauty. Kalman died in 1999. *Colors* continues, with distinction, but Kalman's issues exploded with a spirit and touch no one should be expected to duplicate. In *Colors* the book, Kalman's widow Maira has assembled highlights from the first twelve issues, along with the whole of *Colors* 13, an eighty-six page magazine without a single word. One warning: two or more pages from the first twelve issues are sometimes reduced to fit on a single book page; you may need a magnifier to read the text.

(Un)fashion is a book of "insane, inspired, and beautiful stuff" that Maira and Tibor were working on when he died. All pictures. —MKS

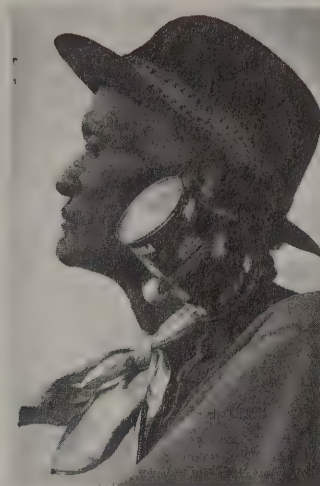


COLORS



Long Cou woman, with neck rings to enhance her beauty, Burma.

(UN)fashion



Masai with pineapple can earring, Kenya.

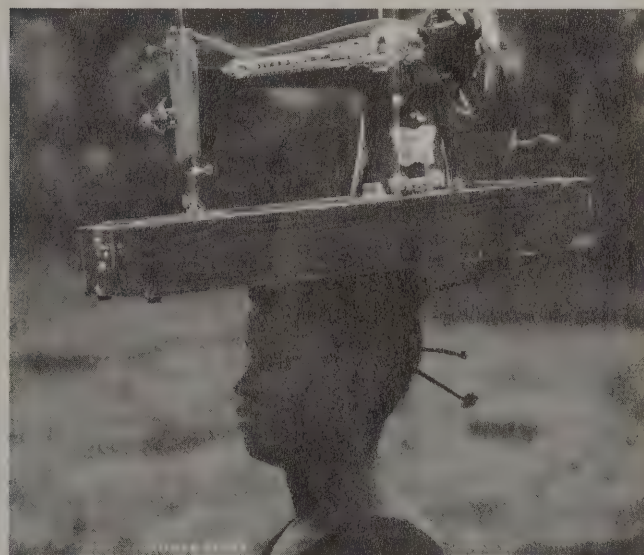
(UN)fashion



AS250 (USSS20)

COLORS

From Colors 9, on "Shopping."



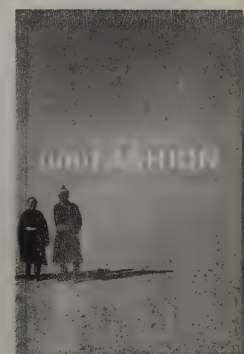
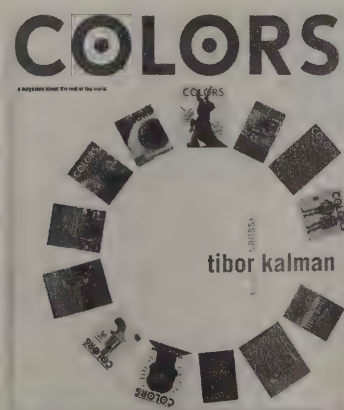
Woman in Zaire.

(UN)fashion



Unidentified picture from the wordless Colors 13.

COLORS



Intelligent Design

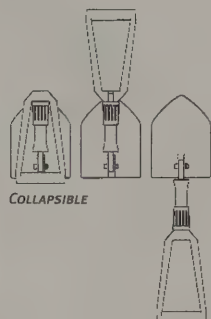
Making Things and Making Meaning

Collapsible The Genius of Space-Saving Design

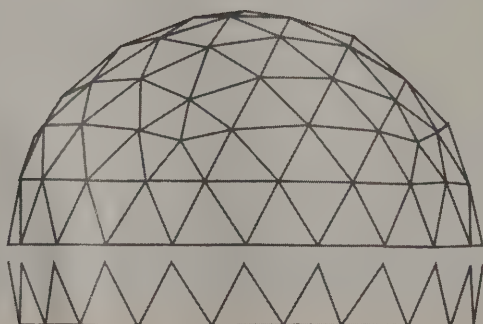
Per Mollerup
2001; 232 pp. \$24.95
Chronicle Books

Objects that shrink when not on duty cut clutter, encouraging elegantly abbreviated living spaces that require less resources, energy, and maintenance. In by-the-square-foot rental spaces, you save money, too. This nicely produced book substitutes classy photographs and drawings for tiresome criticism as it reviews the many possibilities. I love this sort of thing because the need to fold/unfold easily tends to bring out the vital essence of the object.

—J. Baldwin



Above: This compact earth-moving device has been designated official NATO gear. It is still called a spade.



ecoDesign The Sourcebook

Alastair Fuad-Luke
2002; 352 pp. \$35
Chronicle Books

Here is photographic proof that common consumer products can be designed to be both profitable and environmentally friendly (or at least friendlier) without being hideous and aesthetically inferior to their resource- and energy-wasting conventional competition. Purists may sneer that many of these products are not yet 100-percent "sustainable." True enough, but all represent steps in the right direction, which makes the next step more likely to happen, which is how things improve. To tempt you into action, the main course is followed by dessert: access to the materials, manufacturers, and designers of the products illustrated.

—JB

Below: This modular system of shelving, worktops and desks uses the composite materials Homosote and Medex with the natural look of cardboard in a minimalist design that emphasizes the simple virtues of the materials. Ecoworkstation by Studio eg.



ecoDesign

Right: Independence™ 3000 iBOT™. Conventional wheelchairs, whose design has largely remained static for centuries, offer only limited mobility. This chair enables disabled people to navigate rough, uneven surfaces, to "stand up," and to climb/descend stairs. This is achieved by gyroscopic articulations of the frame and three sets of wheels.

Buckminster Fuller Anthology for the New Millennium

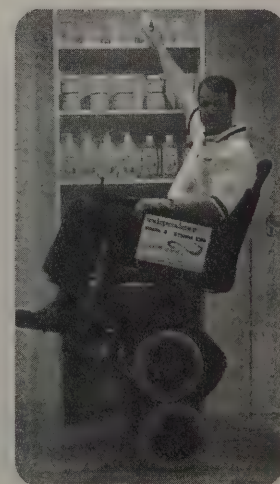
Thomas T.K. Zung
2001; 388 pp. \$18.95
St. Martin's Griffin

There's nothing like reading what Bucky really said, but that's getting harder to do as his books, and many books about him and his work, go out of print. The author worked directly with Bucky on major projects, and is president of Buckminster Fuller, Sadao, and Zung, architects of many Fuller projects. Mr. Zung has chosen excerpts from twenty of Bucky's books to give an overview of the amazing breadth and depth of Bucky's concepts. Additional chapters by people who knew him add to the fun and connect his ideas to the present. The book is just in time to feed a growing interest in Bucky; the number of websites and links has grown from four to several thousand in the last six years.

—JB [whose BuckyWorks has just been issued in Japanese. —Ed.]

"Yet while his public image may have been that of the cool technocrat, nothing could have been further from the truth. What was never discussed was his deeply spiritual dimension. For me, Bucky was the very essence of a moral conscience, forever warning about the fragility of the planet and man's responsibility to protect it. He was one of the rare individuals who fundamentally influence the way you come to view the world.

—LORD NORMAN FOSTER,
"RICHARD BUCKMINSTER FULLER"



ecoDesign

Above: US Air Force aerial, produced by Goodyear in 1960. An energetic soldier with a foot-pump could inflate it to its full height of 18 meters (59 feet) in 15 minutes. Yes, Sir!

“As automation advanced man began to create secondary or nonproductive jobs to make himself look busy so that he could rationalize a necessity for himself by virtue of which he could “earn” his living. Take all of our bankers, for instance. They are all fixtures; these men don’t have anything to do that a counting machine couldn’t do; a punch button box would suffice. They have no basic banking authority whatsoever today. They do not loan you their own wealth. They loan you your own wealth....Approximately total automation is coming. Men will be essential to the industrial equation, but not as workers.

—BUCKMINSTER FULLER, *EDUCATION AUTOMATION*

Fabrication Essays on Making Things and Making Meaning

Susan Neville
2001; 293 pp. \$22
MacMurray & Beck

Nutritious, enlightening prose. Susan Neville journeys to manufacturing sites around her Indianapolis home—from makers of veneer to tomato products to steel to packages of supermarket cookies “made by elves”—in a quest to understand the how and why of industrial process in a “postindustrial” age. I consumed each essay as slowly as possible, and regretfully returned this book to the public library.

—Lulu Winslow

“Everything in here,” the Director of Safety tells us, “you can assume is hot, so don’t touch.” Throughout the tour, one of the [Japanese] MBA students will touch everything she sees. I feel like the Director of Safety’s assistant. I feel like I’m walking through a steel mill with my daughter. The student has on high heels and a perfect black suit. Don’t touch, please don’t touch that, I want to say. And still she touches it. She seems to have an uncanny sense for knowing exactly what things aren’t hot because she never once gets burned, though at one point she slips on mud.

She slips on mud because her slick-soled business shoes are designed for an office, not the inside of a factory. Her life is not preparing her for this kind of tour. For a moment I think about the British troops all

dressed in their perfect red coats in the Revolutionary War and I feel particularly American. We’ve leapfrogged Japan, and its economy is in meltdown. No wonder: they wear business suits on a trip to a steel mill. I’m identifying with the steelworkers. I’m expecting to see many of them, all looking like Arnold Schwarzenegger.

“The caskets have warranties. Do people dig them up and check them? I ask and Malik says no, but there are times that the earth coughs them up—floods, in particular, and earthquakes—and there they are again. You want the caskets to remain intact. You want them to look nice. Like always wearing your good underwear in case you’re in an accident.

The living don’t want bodies floating up at them. The caskets have sealing mechanisms in the foot; when you die, you’re vacuum packed. The sealing keeps out water and dirt and any other outside elements of the earth. This is the phrase they use in his business—not worms, not insects. Outside elements of the earth. A top-of-the line casket will remain intact for seventy-five years. I thought they’d last forever. No, nothing does, Malik explains, but the sealed metal casket comes close.



OZ23 fridge-freezer, Italy. From *EcoDesign*.

German Fingermax paint brush, for people who have difficulty holding a conventional brush. From *EcoDesign*.



Chair made from street signs.
Atelier Boris Bally, USA.

ACCOUNTABLE PREDICTIONS

GRAPHOUND



LONG BETS: a CHANCE TO BACK YOUR PRESCIENCE WITH YOUR POCKETBOOK

by Kevin Kelly

The faster things change the more important anticipating the future becomes. It is no accident that science fiction became popular at the same historical moment that a person could witness the world change in his or her own lifetime. Thinking about the future was no longer philosophical. It was personal.

These days we pay attention to predictions in our daily efforts to figure out how the world will change as we age. Yet making predictions is an act with little or no consequences. If a well-regarded guru makes a prediction that turns out to be correct, he or she will likely let everyone know. But if the prediction is wrong, no one remembers and the guru won't remind us. Without pain for being wrong, predictions are made casually and often irresponsibly.

Long Bets, a project Stewart Brand and I founded, is a service aimed at making predictions more responsible in the context of making our society more inclined to take the long view. Here's how it works.

People with very strong and

informed opinions about the future in a certain arena are encouraged to make a Long Bet. They head to the Long Bets website (www.longbets.org) where they write simple statements of their belief in the form of a wager. For instance: "I bet there will be a woman president by the year 2030." If this was your bet, you would then compose a short argument why you believe this to be true. This argument is the most important part of the bet, because it stands alongside your wager and is the bait for a challenger.

If a challenger (also writing in the website) takes up your wager, he or she writes a competing argument as to why your logic is wrong (silly, stupid, or misguided). The Long Bets site acts like an eBay for bets. It matches opposing views, and then carries the bet into the future and reminds the world when the bet is ready to be resolved.

In order to bet, you must be willing to put up real money. This filters out the frivolous. The minimum amount is \$1,000, so anyone betting must be serious about their belief. The real money brings truth or con-

sequences to the bet. Losing hurts.

Because even private betting between persons is technically illegal in the US, Long Bets has set up the wager as a competition where charities win. For example, each bettor makes a \$1,000 tax-deductible contribution to charity. Long Bets Foundation holds the bets. The bettors each inform Long Bets which charity they want to receive BOTH contributions at the conclusion of the bet. If I bet \$1,000 on a woman president by 2030 and want the winnings to go to NOW, and my opponent bets against a woman president and wants the winnings to go to the Catholic Church, then if my prediction is correct by 2030, the entire \$2,000 plus one half of the investment growth over those twenty-eight years goes to NOW. If my opponent wins, the contribution goes to the Catholic charity. The loser loses by having the charitable contribution go to a nonprofit the bettor did not choose, and by having Long Bets, monitor of the bet, remind the world at the due time that his or her argument was wrong.

In the long run, this is what is important. The logic, perspective, and ideology of the winning bet gets credit and attention, and therefore is rewarded, while the losing argument is seen as visibly wrong and can be discouraged. A long-term perspective could be nour-

ished, and we might even be able to learn how to predict better, since now there would be a feedback loop, a way to learn.

We've started with a bunch of bets made by well-known pundits and mover-types. There are now early bets

at longbets.org waiting for people who find them outrageous and obviously wrong. Here is your chance to trumpet your logic and view of the world. If you take it seriously enough, and want to help a charity along the way, make it a long bet. [we](http://www.wholeearthreview.org)

A FEW LONG BETS NOW ON THE RECORD

BET	DURATION	YES	NO	STAKES
A computer or "machine intelligence" will pass the Turing Test by 2029	2002–2029	Ray Kurzweil	Mitchell Kapor	\$20,000
By 2030, commercial passengers will routinely fly in pilotless planes.	2002–2030	Craig Mundi	Eric Schmidt	\$2,000
By 2012, <i>The Wall Street Journal</i> and <i>The New York Times</i> will have referred to Russia as "the world leader in software development" or words to that effect.	2002–2012	Esther Dyson	Bill Campbell	\$10,000
The universe will eventually stop expanding.	2002 – ?	Danny Hillis	Nathan Myhrvold	\$2,000
The US men's soccer team will win the World Cup before the Red Sox win the World Series.	2002 – ?	Mike Eliot	Ted Danson	\$2,000

Kevin Kelly edited *Whole Earth Review* for six years, and was charter editor of *Wired*. He guest-edited the Winter 2000 "mini-*Whole Earth Catalog*" issue of *Whole Earth*. Kevin's fertile mind has helped launch the All Species Inventory (www.all-species.org), the Long Now Project (www.longnow.org), and now Long Bets. His latest book (all images, no words) is *Asia Grace* (2002; Taschen).

BOOKS

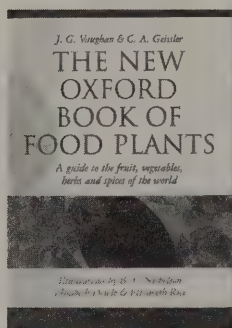
Food Plants

The New Oxford Book of Food Plants

J.G. Vaughan and C. Geissler
1997; 239 pp. \$45
Oxford University Press

Three decades have passed since the Oxford Book of Food Plants arrived at *Whole Earth*. Filled with beautiful paintings of every food crop—from tansy to mangosteen, "transcendent" crab apples to yerba de mate—with a tight info-thick paragraph on each plant on the facing page, this "field guide" to what we eat has exquisitely stood the test of time. The New Oxford Book of Food Plants updates the original with fruits such as the new cultivars of apples and the globally popular mushrooms like shiitakes, once again beautifully illustrated. As a sign of the times, there is a thoroughly rewritten, solid section on nutrition. Kevin Kelly has been putting together two boxes of books for his daughters—books important enough to take to college when they leave home. I nominate the New Oxford Book of Plants for inclusion in those boxes.

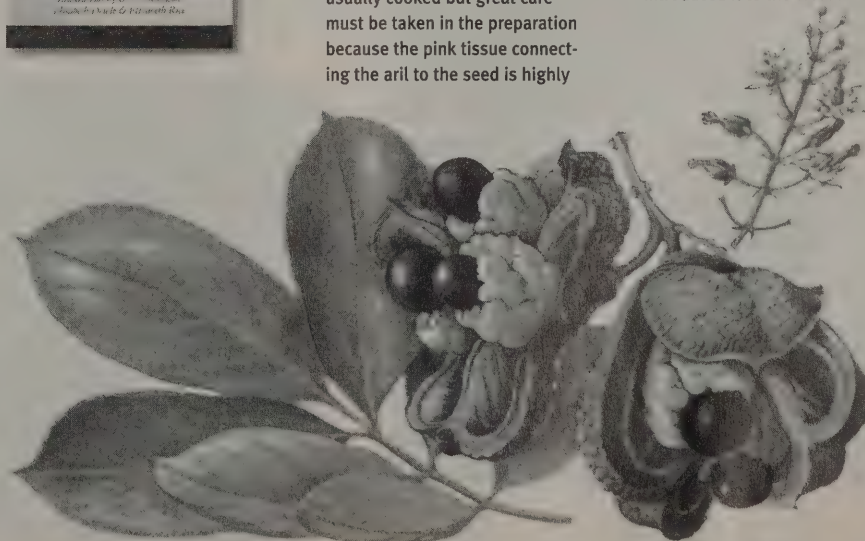
—PW



Tropical Fruit

Akee *Blighia sapida*. An evergreen tree, 7–25 m in height, which occurs wild and is grown in West Africa. It is also cultivated in the West Indies. The fruits, about 6 cm in length, are red or yellow, and, when ripe, split to expose three shining black seeds surrounded by fleshy arils. The edible arils are usually cooked but great care must be taken in the preparation because the pink tissue connecting the aril to the seed is highly

poisonous (the toxic constituent is a peptide), and therefore must be removed. As the unripe arils are also poisonous, those from unripe, damaged, or fallen fruits must not be eaten. A popular dish in the West Indies is akee and saltfish. The Latin name of the plant refers to Captain Bligh of HMS *Bounty*; He could have introduced it to the West Indies.



Lichens, Orchids, and Hemp

Lichens of North America

Irwin M. Brodo, Sylvia Duran Sharnoff, and Stephen Sharnoff
2001; 795 pp. \$69.95
Yale University Press

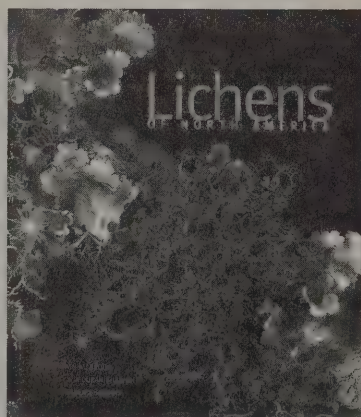
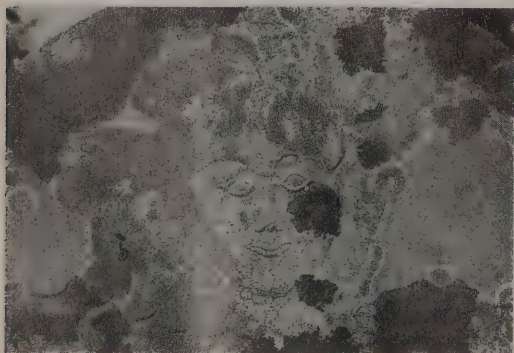
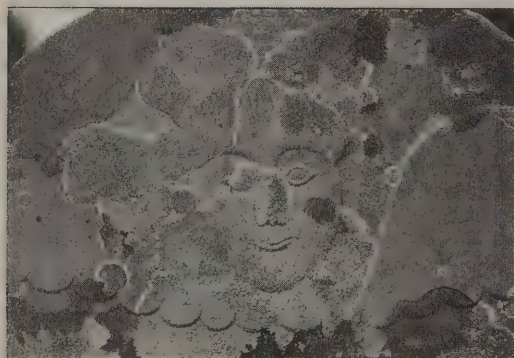
There were no lichens left in Brooklyn in my childhood. Air and land use had banished them to Long Island. My first lichen memories are caressing it on a rock, wondering what to make of this flaky, layered, pale green leaf-like critter.

Out West, lichens were the colorist painters of Yosemite and Idaho lava fields. Now I see them as a sixth kingdom of life, separate from the fungi, protists, plants, animals, and bacteria, because they are an inseparable marriage of two as one. In fact, they are our worldview changers. In twenty years, all creatures will be seen as necessary mixes of species (humans have more cells of other species than our own cells living inside). Lichens will have destroyed our arrogance of bodily self.

Thomas Lovejoy has compared Lichens of North America to Audubon's Birds of North America. Right on! Here are the 3,000 or so species of lichens, beautifully photographed, with range maps and all sorts of info. The first hundred pages—which lichens prefer granite to limestone; why they are great for air-quality monitoring; how they make gravestones beautiful; the details of their symbiosis with cyanobacteria and/or blue-green algae—are the best introduction to lichens ever penned. A must-have tome for the maniacal naturalist.
—PW

“Legend has it that a desert vagrant lichen in Iran and northern Africa, *Aspicilia esculenta*, may have been the biblical manna...that was eaten by the Israelites during their 40-year trek through the Sinai wilderness. The lichen forms rather hard almost spherical growths resembling small pebbles...which lie unattached on the soil. They can be whipped up by a strong wind and blown into heaps where lumps soften and swell in heavy morning dew....People in west central Asia have been known to eat it....The lichen is not found in Sinai—at least not now.

Left: Gravestone in Cape Cod covered with *Dimelaena oreina* and a species of *Aspicilia* was photographed in 1983 (top) and 1994 (bottom), and shows the radial growth and decay of the lichens.



The Hemp Report

The Hemp Report

#13-2255 Smith Street
Regina S4P 2P5 Saskatchewan Canada
306/790-9305, www.hempreport.com
(Name/User ID: hemp
Password: food)

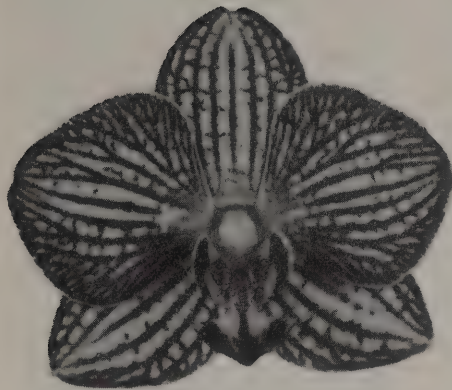
Several hemp magazines have died on the stalk. This online report (formerly the Hemp Commerce and Farming Report) is the best that remains.

The Hemp Report takes a middle path between the zealots on the pro- and anti-hemp sides. On the one hand, drug warriors (unable or unwilling to distinguish between cannabis and nonpsychoactive industrial hemp) deny the legitimacy of all hemp products. Though it was grown worldwide for thousands of years, hemp is not mentioned once in the Smithsonian Institution (although it is in there); I went through the New York State public school system without once learning about hemp's vital place in American history.

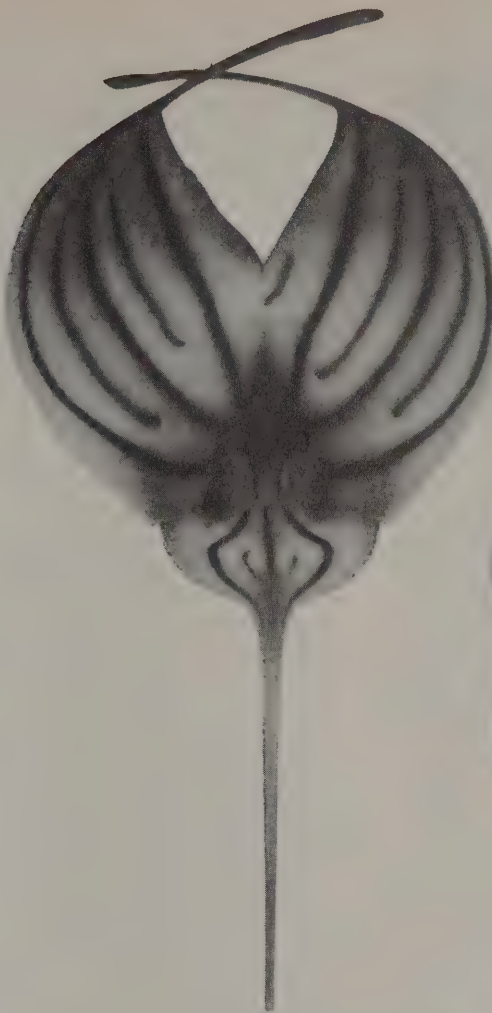
On the other hand, the evangelists praising hemp as a miracle cure for the world's agricultural ills have been guilty of lots of hype (Yes, Rosemary, hemp does need a good bit of fertilizer to thrive).

Coming from the heart of Canadian hemp farming country in Saskatchewan, the Hemp Report tells it like it is right now. Each issue has a focus, such as hemp marketing, hemp foods, or what's happening with fiber, along with reports from the fields (including descriptions of the legal seed varieties available for growing in Canada). The Hemp Report is free, funded through sponsorships and reader donations.

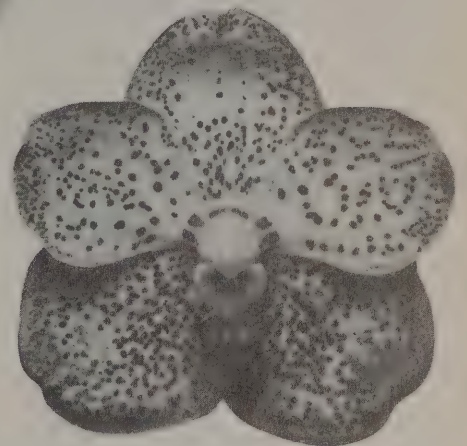
—Robbie Anderman



Doritaenopsis Sogo Maria



Masdevallia Charisma



Ascocenda Crownfox Magic Lantern

Ultimate Orchid

Thomas J. Sheehan in association with
the Smithsonian Institution and the
American Orchid Society

2001; 160 pp. \$24.95

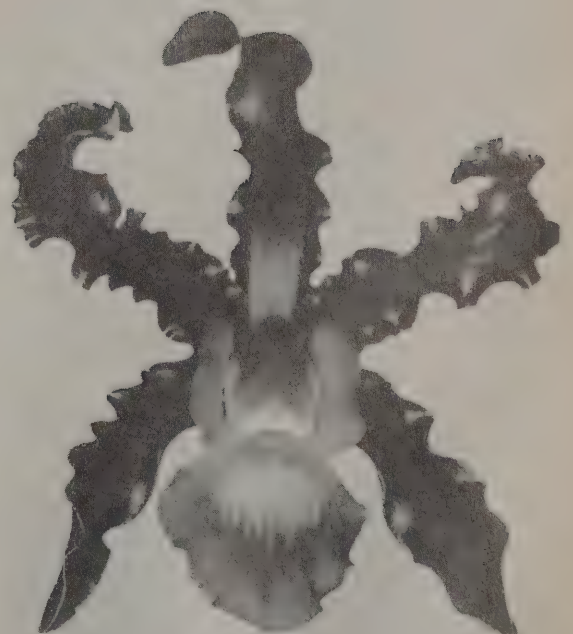
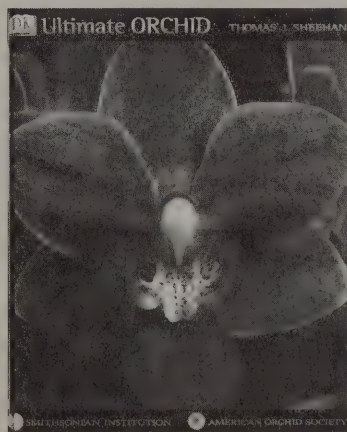
DK Publishing

Orchid books are everywhere these days. There are books about the collectors of the nineteenth century, the smugglers of the twentieth century, and specific genera. There are extensive manuals for orchid species identification and general books on how to grow the orchid you picked up (on sale!) at the hardware store. Ultimate Orchid combines often-overlooked information with a lot of really good pictures. It is also very reasonably priced for a book with such extravagant use of color photos.

Showing how different orchids are related is not easy, because the orchid family is huge, with over 25,000 species—they are still being regularly discovered—and over 100,000 hybrids. As it explores the relationships, the book becomes unusually informative. The author's two-page chart explaining the often very confusing rules of nomenclature uses boxes and colors that really work; it's delightful to see the rules laid out so clearly. Sheehan then works his way through various groups of orchids, using gorgeous pictures to show relationships and short informative blurbs about individual species and hybrids. The book ends with chapters about human interaction with orchids, including culture, conservation, judging, and collecting orchid stamps.

"Ultimate"? That's a little strong. If you are interested in learning a lot about growing orchids you'll need a book about culture. But this is a fine way to introduce yourself to orchid relationships, and the pictures make it a joy.

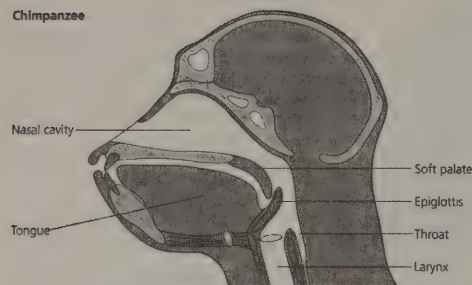
—Mary Nisbet



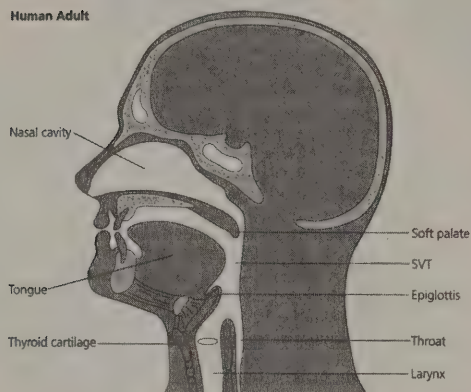
Schomburgkia splendida "Roberto"

Evolving Evolution

Chimpanzee



Human Adult



Human Natures Genes, Cultures, and the Human Prospect

Paul Ehrlich
2000; 531 pp. \$15
Penguin

Pulling together a wealth of material—from paleontologists, neuropsychologists, cultural anthropologists, linguists—Paul Ehrlich explores how we came to be human, and how our evolutionary journey frames the human predicament today. Human Natures is a welcome guide to the burgeoning state of current knowledge about human origins, and to some lively debates.

The “Natures” of the title is Ehrlich’s nod to the individual and cultural variousness that overlays our shared universals. He challenges the notion that genes, selfish or otherwise, determine much of our behavior, and makes a strong case for the primacy of culture. Ehrlich also has some provocative thoughts about the consequences of the lag between rapid cultural and slower biological changes, and about the conscious control of cultural evolution as our best hope for a sustainable future.

—Joe Eaton

Left: Cross sections of the heads of a chimpanzee and an adult human being. In the chimp, the tongue is entirely within the mouth, whereas in the adult human, the back of the tongue forms the front of the supralaryngeal vocal tract (SVT), giving it part of the flexibility that permits speech. The higher position of the chimp’s larynx allows air to go unobstructed to the lungs while food passes on either side of it. In the human, air and food travel a common pathway, increasing chances of choking. In our distant ancestors, the selective advantage of expanding the range of producible sounds evidently overcame the advantage of avoiding choking.

“In our approach to environmental problems, there is an enduring overemphasis on visible air and water pollution and an underemphasis on the decline of ecosystem services and the population consumption factors driving that decline. Those faulty perceptions of the relative urgency of various environmental problems are caused in no small part by our evolution as sight animals and are exacerbated by the visual impact and immediacy of television. They result in much misallocation of effort in the battle to maintain environmental quality. Had we evolved the chemoreceptive capabilities of dogs (or male giant silk moths, which are sensitive to extremely low concentrations of certain chemicals), we would be much more concerned about issues such as the presence of hormone-mimicking synthetic chemicals in the environment. If we could see certain frequencies of ultraviolet light, then the ozone crisis might never have occurred because corrective steps would have been taken much sooner.

Tinkering with Eden A Natural History of Exotics in America

Kim Todd
2001; 302 pp. \$15.95
W. W. Norton

Not too long ago, emu ranching was the Next Big Thing in the American West. When that bubble burst, some disillusioned growers turned their big flightless birds loose to fend for themselves—one more addition, if they survive, to an ever-growing list of non-native flora and fauna.

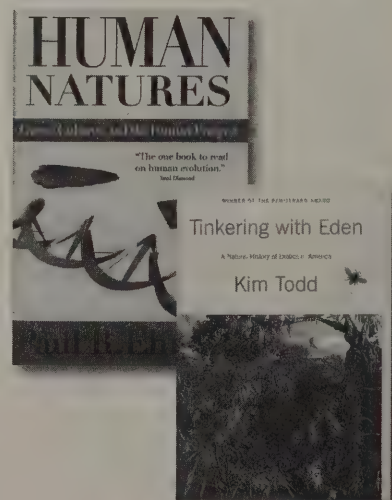
Kim Todd surveys the history of these introductions, intentional and otherwise, in North America and Hawai‘i. It’s been happening since colonial times, with pigeons in Quebec and honeybees in Virginia. And they’re still coming: pet-store escapees, stowaways in

ship ballast, hitchhiking weeds. There are places—Hawai‘i, Florida, California—where exotics now make up much of the visible bioscape, crowding out the natives. In biological-control arms races, scientists bring in exotic predators and parasites to control exotic pests.

What’s different about Todd’s book is her focus on the human stories behind these alien arrivals. Some motivations were economic: to breed a disease-resistant silkworm strain or promote fur farming. Some were recreational: new and “better” sport fish and game birds. Some were just plain quirky. Thanks to drug manufacturer Eugene Schieffelin, who wanted to naturalize all the birds in Shakespeare, we share the continent with 200 million European starlings. Tinkering with Eden is an engaging treatment of a serious and complex environmental problem.

—JE

“Since Europeans began settling the area we now call America, exotic species have flooded in, becoming so prevalent that many Americans can’t say which plants and animals are native and which are not....Exotics may have contributed to the decline of 49 percent of threatened and endangered species. On the other hand, as Alfred Crosby points out in his book *Ecological Imperialism*, other nonnative species are inextricably tied to the way most of us live...in this land pulsing with strange beasts. Currently more than forty-five hundred exotic creatures buzz, creep, and wing their way over American soil, and each has a very specific, compelling history.



The Evolution Explosion How Humans Cause Rapid Evolutionary Change

Stephen R. Palumbi
2001; 277 pp. \$24.95
Norton

Despite my friends in Kansas, I don't think God planted fossils in rocks to test my faith. Maybe divine selection gifted me the two great loves of my life and many friends, but natural selection seems to explain most else more interestingly in the biological world. And, as Palumbi delightfully writes, natural selection keeps on truckin'. His focus is how humans have accelerated, intentionally and unintentionally, rapid recent evolution—especially the evolution of pesticide-resistant insects; drug-dodging HIV, TB virus, and various bacteria; and shrinking female shrimp over periods of months or a decade. This is the only book on the subject. It's a thoughtful, chatty, well-written tome by an obviously crisp intellect.

I asked Dr. Palumbi if keeping humans alive with artificial medicines was changing our species' gene pool. As many more diabetics, hemophiliacs, and thyroxin-dependent humans stay alive and reproduce, what happens? He was not too concerned, as those kept alive are a minuscule part of the population. From an evolutionary point of view, it's small-time. Of course, if the flood of medications stopped, the mortality would feel big-time in many of our lives. We would pray for divine intervention.

—PW [Thanks to Ray Mendez. A short techno-version of this book can be found in *Science*, 7 September 2001]

“The cold-water rock shrimp, *Pandalus borealis*, lives in the northern Atlantic....As in many fisheries, shrimpers target the largest tails, and the proportion of shrimp over 80 millimeters declined from 44 percent in 1950 to

14 percent in 1962. Unfortunately for *Pandalus borealis*, almost all of the large shrimp are female, because in this species each individual undergoes a sex change sometime after the first year of life.

Every rock shrimp functions as a male until it is 75 or 80 millimeters (2.95 to 3.14 inches) in length. Then it abruptly changes to a mature female....

But if the fishery takes all large animals, then it leaves few females to provide any eggs, and there are few advantages to waiting until after the male years to become female.

The Spirit in the Gene Humanity's Proud Illusion and the Laws of Nature

Reg Morrison
1999; 259 pp. \$27
Cornell University Press

Morrison's premise is that our genetic make-up, including spirituality and a capacity for language-based thought, has enabled our species to triumph, but may ultimately hasten our demise. With genetic drives in mind, we can better understand our perceived "invincibility," our expectations of human behavior, and the powerful role of "unnatural" behavior, whether heroic, vicious, or simply mundane.

This is no side issue that will disappear in the clear light of technological advances and free markets. For democracies, a major challenge will revolve around the politically contentious, ethically difficult nature versus nurture argument: to what degree and when is our individual and collective behavior genetically or culturally determined? And what do "we" do about it, subject as we are to these genetic compulsions?

Morrison interconnects four themes: the stunning accumulation of environmental devastation our species has wrought over time; the evolution and current status of our brain dynamics, mediated by our genes; and the consequences of that evolution—the emergence of a "third chimpanzee," distinguished by language and a compulsion to spiritualize (mysticize, reify, idolize, and create the myths we live by). Morrison's fourth theme examines how the nature of our cultures and the spiritualization of language combine with our genetically driven behavior (including a compulsion to reproduce and to disregard ecological boundaries).



THE SPIRIT IN THE GENE

A gastric-brooding frog, being born through its mother's mouth. These frogs, which leaped the taxonomic boundary between amphibian and mammal, are now presumed to be extinct.

This is a page-turner, full of spellbinding, illuminating examples from the physical environment, biology, and humanity. Morrison draws many examples from the unfamiliar (for most of us) Australian outback that he has long observed and explored. Even familiar ideas become newly thought-provoking in the rich context he conjures.

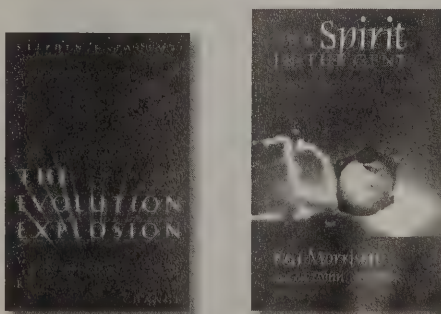
—Don Michael (courtesy Global Business Network)

“We habitually attach some degree of mystical significance to anything that has a bearing on the survival of our genes, now or in the future, and this extends to the very edge of our perceptions and the limits of rationality. Some of us even give names and ascribe personalities to our cars...or feel that things go better for us if we wear particular items of clothing. The late Carl Sagan expressed it perfectly: “We're significance junkies.”

“It is clearly the genes rather than the cortical neurons that have genetically dictated the ebb and flow of cultural fortunes throughout history. Territorial greed and ambition, racial prejudice, religious fundamentalism, and the corruptive processes of acquiring and wielding power—these are the things that ultimately determine the fate of nations, not wise counsel and clever gadgets.

DATES OF DRUG DISCOVERY AND RESISTANCE		
Drug	Discovery/ Introduction	Resistance
Penicillin	1928/1943	1946
Sulfonamides	1930s	1940s
Streptomycin	1943/1945	1959
Tetracycline	1948	1953
Vancomycin	1956	1988/1993
Methicillin	1960	1961
Ampicillin	1961	1973

THE EVOLUTION EXPLOSION



Joanna Macy: "The Den Mother of Deep Ecology"

Widening Circles A Memoir

Joanna Macy
2000; 285 pp. \$17.95
New Society

The Love of Nature and the End of the World The Unspoken Dimensions of Environmental Concern

Shierry Weber Nicholson
2002; 216 pp. \$27.95
MIT Press

Whether or not they know it—and many of them do know it—young activists like Julia Butterfly Hill who take direct action on behalf of the environment have an intellectual and spiritual forebear and potential mentor in Joanna Macy. *Widening Circles* is the personal voyage of this renowned Buddhist scholar, activist, and teacher. It's filled with world travels, ironic side journeys (Macy once worked for the CIA during the depths of the Cold War), and intimate reflections on her struggles with the culture shock of repeated international relocations, mainstream American sex roles, monogamy, and the role of religious faith and social responsibility.

Macy spent her first five decades searching for a purpose, until she visited Tibetan refugees in India and heard old prophecies of "Barbarian powers" that "waste their wealth in preparations to annihilate each other [with] weapons of unfathomable devastation." The second half of this memoir is a chronicle of what has come to be known as "engaged Buddhism," with a focus on antinuclear activism. Macy was involved in the landmark protests against the Seabrook nuclear plant in New Hampshire, against the reopening of Three Mile Island, and at Chernobyl.

Ironically, she has at times been judged harshly by other Buddhists, either for not focusing on "self-realization" enough, or conversely for being a "passive mystic" as she has tried to empathize even with those who do evil. Her message is conveyed by the example of her own life: rather than being either paralyzed by dread or ignoring

the planetary predicament altogether, one can "undertake an endeavor that, given the political context, [seems] impossible, or foolhardy at best." Macy is the inspired and inspiring den mother of Deep Ecology.

Shierry Weber Nicholson relies partly on Joanna Macy's writings in her far more formalized analysis of the razor wire between ecological hope and despair. Drawing most heavily on somewhat arcane psychoanalytic writings, but also on mentors from Cézanne to Gary Snyder and Beethoven, Weber explores the implications of Aldo Leopold's observation that "One of the penalties of an ecological education is that one lives alone in a world of wounds." For her, avoiding that aloneness requires that we "mourn for this dying way of life that we have lived...the petroleum era....How can one mourn for something destructive? How does one mourn when one is guilty?"

Nicholson's first prescription is for self-awareness, to not succumb to apathy (she agrees with Macy that apathy is "a mask of suffering"). She also explores further coping mechanisms, such as "psychic numbing" and "doubling," but adds that "it is important to be able to respond to something disturbing by being disturbed." And out of that disturbance, one might hope, comes action.

These books are insightful antidotes to ignorance, despair, and apathy.

—Steve Heilig

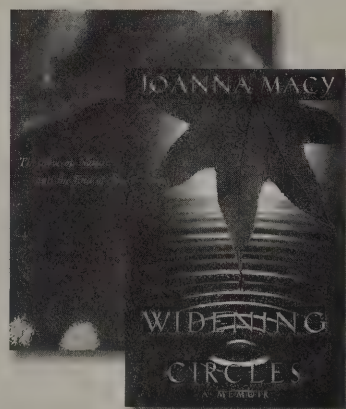
"I glanced at Bill, remembering his early objections to 'negative thinking.' Only in the last minute did he pick up his crayon and draw. When we gathered in clusters to look at each other's work, he displayed his own. It was all in blue and very simple: a circle with a few longitudinal and latitudinal lines, and more blue scrawled around it. Suspended in that circle was a large human tear.

"That's the sadness," he exclaimed. "The sadness I go to bed with every night and wake up with every morning. The sadness that we're wrecking our world and that my kids are just out to make money and don't seem to give a damn."

Next to him, a woman, a local peace worker, explained her picture of a nuclear power plant. Stick figures encircling the cooling tower showed how protesters could close it down, and off to the side a group of kneeling figures showed, she explained, the spiritual strength needed for that to happen.

Bill studied her drawing, then said quietly, "Prayers and protests aren't enough. Not enough to keep us going. To clean up this mess, we need this too. We need our sorrow." He placed his paper beside hers, to complete it. —WIDENING CIRCLES

"Optimism and hope are not the same. Optimism is both more detached and more deluded than hope. In optimism, we predict that the future will be good. There is a semblance of detachment that contrasts with the intimacy of hope. Does this detachment mean that optimism is rational? Surely not; optimism implies a willfully positive prediction, determined to see a continuing increase in whatever one is optimistic about. As Christopher Lasch points out, 'Progressive optimism rests, at bottom, in a denial of natural limits on human power and freedom, and it cannot survive for very long in a world in which an awareness of those limits has become inescapable.' —THE LOVE OF NATURE AND THE END OF THE WORLD.



Global Leadership into the Future

Reconciling Opposing Cultural Values

Charles Hampden-Turner is one of my favorite writers. He has a highly original mind that finds expression through a combination of words, pictures, and diagrams, most famously in Maps of the Mind.

Charles joined Shell in the 1980s and introduced a methodology that strengthened the thought processes leading from scenarios to strategy. In turn, this led to his partnership with Fons Trompenaars, an innovator in understanding and measuring cultural differences. Since then, they have collaborated continuously.

Their latest collaboration is 21 Leaders for the 21st Century. This book surveys a variety of leaders, not only in traditional business, whose acumen at reconciling opposing cultural values and dilemmas has led to personal and organizational success. Most are from Europe [and only one is a woman—Ed.] and the tone with which they describe their accomplishments—and in some cases their failures—differs from standard US success stories. Anyone who has read these authors' more theoretical books will be enchanted to see how their theories actually work out in practice.

—Napier Collins [courtesy Global Business Network]

“Overly affective (expressive) cultures and overly neutral cultures have problems in relating each to the other. The neutral person is easily accused of being ice-cold with no heart; the affective person is seen as out of control and inconsistent. When such cultures meet, the first essential for the international leader is to recognize the differences and to refrain from making any judgments based on the presence or absence of emotions.

Is the State Obsolete?

We live in a world of nation-states, but many wonder how long this will last. Martin Van Creveld provides an insightful history of the state and the most lucid analysis to date of the contemporary challenges it faces. Although most of us know that the modern state is a fairly recent invention—only a few centuries old—few of us understand the dynamics by which feudalism gave way to the nation-state. Van Creveld helps us see such forces as the struggle between the idea of “nation” as the spirit of a people and a nation that is embodied in laws and procedures. He traces its evolution over centuries and across the globe: before the state (prehistory–1300 C.E.); the rise of the state (1300–1648); the state as an instrument (1648–1789); the state as an ideal (1789–1945); the spread of the state (1696–1975); and the decline of the state (1975–?).

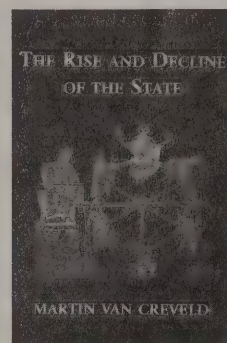
This is an important book. Everywhere, we see signs that the nation's key functions, including the ability to make its own laws and to protect its citizens' political, military, cultural, social, and economic lives, is under attack or on the wane. How changes will continue to unfold—whether peacefully or through bloody upheavals—is highly uncertain and of real concern.

Although the challenge to the nation-state has become almost a cliché, in his concluding chapters Van Creveld suggests another perspective. This may not be the end of the nation-state after all. Rather we may be witnessing the development of a far more complex ecology of power in a network world.

—Peter Schwartz [courtesy Global Business Network]

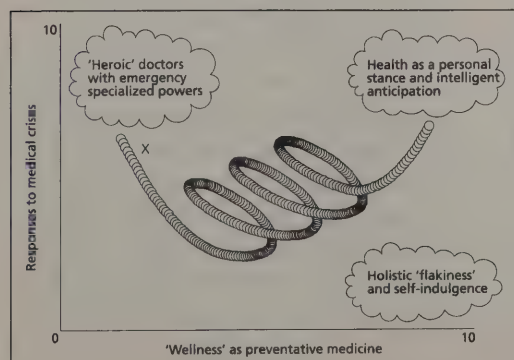
“The waning of major interstate war...was brought about primarily by the introduction of nuclear weapons. From the beginning of history, political organizations going to war against each other could hope to preserve themselves by defeating the enemy and gaining a victory; but now, assuming only that the vanquished side will retain a handful of weapons ready for use, the link between victory and self-preservation has been cut.

“...as some states...become less capable of providing defense, parts of that task may themselves be taken over by the multinationals....[Additionally] the internationalization of business and the opening to foreigners of one stock exchange after another meant that a greater percentage of the assets belonging to the citizens of each state was likely to be located beyond its borders; and that vital economic decisions which affected such things as investment and employment inside each state were likely to be made by people over whom it had no control.

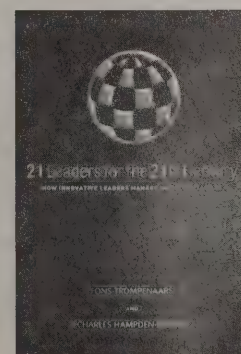


The Rise and Decline of the State

Martin Van Creveld
1999; 439 pp. \$22
Cambridge University Press



The diagram plots a dilemma faced by Val Gooding, CEO of BUPA, the UK's largest private health insurer, as she tries to take the company from the location marked “X” to that of supporting members' personal responsibility, without falling into the trap of health fads. The helix is counter-clockwise: concentrate first on prevention, and second on timely medical responses to allay the worst crises.



21 Leaders for the 21st Century
How Innovative Leaders Manage in the Digital Age
Charles Hampden-Turner and Fons Trompenaars
2001; 356 pp. \$29.95
McGraw-Hill

Whole Earth is a conversation. Compliments, cavils, and corrections are welcome. Letters and email may be (reluctantly) edited for space or clarity.

Right down my alley

I laughed my head off reading about the table car (Winter 2001). I am pleased to meet Arhundati Roy. I appreciate reviews of *The Birth of the Charodic Age* and *Longterm Capital Management*. There's considerable interest here in fuel cells and wind power. Personally, I am obsessed with decent affordable housing for buyers and renters with modest means.

Hang in there. I am rooting for you.

Autumn Melvin
Billings, MT

Welcome home, *Whole Earth*

I just spent the whole evening with yr mag (Spring 2002). It's been quite a few years since I have wanted to read more than a few pages. My husband has continued to subscribe because when you started we were so thankful for the intelligent and broad look at life you articulated. We knew your recent years were useful to some, but we were left unengaged. In the old days, I used to read every article...and I did just that the other night. I think the gift of this last mag was to see the WHOLE again—the spirit, the mind, the body, others ways of being human, being alive, ways of celebrating the wonder on planet Earth and repairing the messes we've made, reminding us we have a choice—every day, every moment—to help or to hinder.

Welcome home!
Tandy Beal
by email

Just a quick note to congratulate you on Spring 2002; love the Doc Cop and Berkeley food pieces in particular, and the GBN piece is a real coup. GrrlzZine bit is fun; must check them out. (My wife cracked up over the "I just know I can change him!" caption; too true.)

Thanks to you for all the work.
Toby Hemenway
by email

More international coverage

We'd like to ask for more international coverage. We'd like to get more serious information on environmentalists, activists, and environmental problems in some more esoteric countries of the world.

Thank you.
Margaret (Magi) Kelly
by email

Check out the new international site at australia.edu/international.

As an Earthling first, North American second, I take umbrage at the convention of displaying photos of our planet with the North Pole at the top of the page. This North-centric worldview is so deeply etched into our psyches that even folks in the southern hemisphere can't seem to refrain from perpetuating it.

Though your Winter 2001 back cover achieves a glorious gem-like quality, with virtually all of Antarctica and much of the southern hemisphere visible, the accursed orientation persists. At least the act of reciting the very wholistic Earth pledge requires one to circumnavigate this depiction of the globe, to contemplate it from every angle, momentarily freeing the mind of such scientific constructs as axis of rotation or orbital plane—and, blissfully, of our penchant for virulent territoriality.

Quegg Freeman
by email

The white men are at it again

Your Spring 2002 issue looks charming. But nine older white men foretelling the future in the company of one white woman and one Latino man?

They're brilliant and fascinating. But come on.

I wish you had rounded out the GBN choices with some kids from Youth Radio, or Alice Walker, or some women Buddhist teachers, or Jarvis

McMasters from Death Row.

This is the perennial burr under the saddle in your otherwise wonderful and idiosyncratic magazine. Some things never change, you old fogies.

Katy Butler

Old fogiette, former contributor, hoping to be one again.
by email

Organic: healthier?

[We received several letters about "Organic"—Is It Healthier? in Spring 2002. We have edited letters so as not to repeat points made in more than one. Some errors resulted from our not catching mistakes by the transcriber. We regret these; Susun Weed was not responsible for them. —Ed.]

Your decision to publish Susan Weed's "Organic—Is It Healthier?" gives the impression that you have let your poetic impulse trump your interest in "tools for living."

With regard to plants and carbon monoxide, Weed seems unable to decide whether they produce it or consume it.

If carbon monoxide has any importance to plants, how come I was able to look into a dozen treatises on photosynthesis and plant metabolism and find that most of them didn't even mention CO in their indexes?

Molecules of food go through the soft "pallet" [sic]? If [Weed] meant "palate," this would have them ending up in the nasal cavity.

A gelatin capsule resists stomach acid and doesn't open until it's in the small intestine? I've occasionally had those capsules yield to saliva, before they even get to the stomach!

Iceberg lettuce has 6 mg. of calcium per 100 g.? You could have checked with your neighbor, Laurel Robertson: the tables in her famous *Laurel's Kitchen* give iceberg the equivalent of 20 mg. of calcium per 100 g. You could confirm this at the USDA website, www.nalusda.gov/fnic/cgi-bin/nut_search.pl), where the figure is 19 mg.

Farmers leave their tractors idling for an hour and a half for lunch breaks? I don't know any farmer with that much time to spend on lunch, let alone that much fuel to waste.

Diesel tractor fuel contains lead? Not according to Joseph R. Sopata, the EPA chemist who answered my email query.

Could "eutrification" be the transcriber's version of "eutrophication"? Misspelling sends the message "We haven't read much about this topic, but trust our knowledge anyway."

Did anyone follow up on that flawed study of tofu and dementia? One of Dr. Zorba Paster's recent programs (Wisconsin Public Radio) debunked it: the number of persons studied was small, and they were mostly poor people with other health problems.

Ten years of eating nonorganic produce is equal to eating one pound of nonorganic butter, for concentration of pollutants? [The author] goes from indicting fat because animal metabolism concentrates toxins in body fat to condemning vegetable fats as well (nuts, grain germ, etc.). This is goofball reasoning.

Why should I believe any of this? Your blurb qualifies Weed as an "assumption breaker." I'm sorry her assumptions are broken. I hope she can get them repaired soon.

Sincerely,
Lee Hartman
Carbondale, IL

I read *WE* to maintain open-mindedness, and I enjoy the presentation of controversial or even fringe material. Recent articles on energy and water were insightful gems. But the editorial standard has dipped with the [organics] article. Here's why: "Every one of my cells contains plants, called mitochondria....The level of oxygen in the air is way too high for most plants....Children are too smart to eat poisonous plants."

It is close to irresponsible to print this sort of thing in the vicinity of anything factual.

Peace,
Mark Edelman
Fanwood, NJ

The author says soybeans pollute because their endogenous nitrogen is not worked into the soil and therefore runs off. An appreciable amount of the nitrogen in soybeans is in the roots and nodules that house the nitrogen-fixing bacteria. They are already in the soil. For the nitrogen in the above-ground part to run off in stormwater, the soy plant proteins must first be degraded by microorganisms, a process that is generally considered to be healthy for the soil and not a contributor to nitrogen pollution in run-off. If the author has data to show that composting is problematic, she should reference it.

Sincerely,
Carrie Schneider
San Diego, CA

Being a member of the Canadian Organic Growers, I receive info relative to organics. There is an easy to access report at www.ccof.org/whatsnews.htm that shows substantial mineral and nutritional differences in the products of the two methods. I don't know much about BIG organic farms...small farmers often can put more of their attention into their crops and soil.

Best Wishes,
Robbie Anderman
by email

Susun Weed responds:

I both speak in public and write, and these ways of presenting myself are quite different. When I write, I fact-check rigorously, rewrite, review, rewrite, ask for critical input, rewrite. When I speak I invite the audience to enter an altered state with me and I allow myself to spontaneously respond to the "needs" of the group. Both can weave a healing mantle of words, but the written word activates the rational mind, while the spoken word activates the intuitive mind.

My talk at Bioneers was not ratio-

nal, strictly factual in every detail, or impeccably footnoted. That was never my goal. I wanted to try out new ideas, stories, metaphors, ways of combining and applying information and wisdom in a situation with deeply intelligent and caring pupils. I was pleased with the journey we made together and hoped that by allowing *Whole Earth* to print parts of it others might share as well. My thanks to those of you who did and wrote to tell me so.

My thanks to those who wrote to challenge statements as reproduced in *Whole Earth*. As the point of my talk was "question what you are told," I congratulate those readers in getting the point. Some of them, however, got caught in defending what they believe is true, instead of questioning their own long-held beliefs and assumptions.

• *Does every cell of your body contain actual primitive plants?*

Mitochondria are organelles that control the life, energy, and breathing of our cells (according to my medical encyclopedia). They have been known to be plants for at least fifty years.

• *Is it possible that tractors contaminate organic food with lead?*

When I said "diesel tractors," I was simply thinking "tractors." I'm sorry if the "diesel" obscured my point—that food labeled "organic" can still cause harm.

Motor fuels can still contain trace amounts of lead. According to an Agricultural and Biological Engineering report from Purdue University, during 1999 at least 10 percent of vehicles in use were still using gasoline with lead. Older tractors are most likely to use leaded fuels, and soils in areas where tractors are idled are high in lead. A significant part of the produce sold as organic is produced on farms outside of the USA, where standards for lead in fuels are different or nonexistent. (A part of my talk where I discussed the compaction of the soils by tractors and how it relates to minerals was not reprinted. This puts the remarks about lead out of context.)

• *How could I say that children are too smart to eat poisonous plants?!*

Paranoid parents do take "poisoned" children to the emergency room, but rarely because the child has actually eaten a poisonous plant. (Poke berries account for many of these visits. The hard seed in the berry is poisonous, but children cannot break the seed and release the poison. The berries are harmless.)

I have interacted with thousands of children in "natural" settings including suburban back yards, schoolyards, and inner-city community gardens and parks. Children are better observers than most adults and more careful in their approach to plants. If they taste a poisonous plant, they spit it out. There is no plant (mushrooms are not plants) so poisonous that tasting it will kill. (Some plants contain compounds that irritate oral tissues; milk is the usual antidote.)

• *How could soybeans pollute when they are traditionally used to improve soil fertility?*

This one was an eye-opener for me when I read about it in *Scientific American*. Current agricultural practices turn soy's ability to fix nitrogen into a source of pollution. Of course, root nodules fix nitrogen, but the soy plant uses this "fertilizer" to promote its own growth, moving much of the nitrogen into its green parts. When turned into the soil, the nitrogen in the greens increases soil fertility, but according to this article, farms today often leave the greens standing after the beans are harvested, and when they decompose, the nitrogen runs off into the water.

• *Never learned that the lymphatic tissues in the roof of the mouth are active?*

I am not surprised. I didn't learn it my anatomy or physiology classes either. Paul Bergner, author of five books and director of the clinical studies program at the Rocky Mountain Center for Botanical Studies, explained this to me. We are so amazingly complex, so integrated, so full of surprises.

(Of course I said "palate," but the

transcriber wrote "pallet." There are other errors of this sort—"hypericin" was transcribed as "hyparison" and "hyperflorin" became "hyperfloren." Had I seen the article before publication I would have made those corrections, for, as most people will tell you, I am a stickler for detail.)

• *How can the atmosphere contain too much oxygen for plants?*

Agricultural scientists experimenting with oxygen concentrations in closed greenhouses found that plants grow better and produce more when there is a less oxygen available to them than currently found in the air. To a plant, oxygen is a pollutant.

I am glad to see a study that finds more minerals in organic produce. I am sure my organic produce has more. I agree that organic is supposed to be about keeping the soil healthy. But that is not my experience when I visit big organic farms. Neither is it my experience on many of the small organic farms I have visited.

I read many medical and scientific journals as well as a large variety of other health-related, environment-related, plant-related periodicals. The information in my talks is accurate (within the bounds of memory and the oral tradition), though often not widely known and perhaps contrary to what you think you know. As to its usefulness, one of my teachers is fond of saying: "Half of everything I teach you is worthless, but I have no idea which half."

Green blessings and thanks for you.

Food Revolution or Revulsion?

I read "A Food Revolution in Berkeley" (Spring 2002) with excitement, admiration, and deep intellectual pleasure. I believe it is the best single magazine article I have ever read.

You have captured the essence of so many of the elements of the programs as well as of so many of the people and have communicated so clearly. Really and truly, I believe that your piece was the intellectual equivalent of a Chez Panisse meal...delicious through natur-

al means and ingredients.

I thought all of this before I read the quotes you attributed to me, after which point my admiration only grew. You managed to extract the best from what I said and turn it into something.

Michael Murphy

by email

Michael Murphy, an evaluator of the Food Systems Project from Harvard and Massachusetts General Hospital, is quoted in the article. —Ed.

Is "A Food Revolution in Berkeley" paid advertising, or is it really an attempt to be journalism? The Center for Ecoliteracy (CEL) may wish it were the catalyst for so much in Berkeley, and that it had accomplished all that you represent, but that is like Al Gore stating that he started the Internet.

Gardens in Berkeley started a decade before CEL even existed. As a foundation, it partially funded for a limited time, a number of schools, some in small amounts. Does that make them a catalyst or instigator? If so, then you should have listed all the funders, including the Berkeley Public Education Foundation which funds almost all the school gardens, community members, and the local PTAs. If CEL truly "reinvented" the school district's food service, then I invite you to come eat lunch in Berkeley's school cafeterias. One look, much less one bite, will tell you that no "reinvention" has in fact occurred. The program they tout made no fundamental change. Fundamental change takes much more effort, over a much longer sustained period of time.

I've been in Berkeley, working in the schools and school gardens for a decade. I haven't seen any integrated curriculum. I have seen Xerox copies, most cut and paste from other sources. The proof is successful application in the classroom, and that is not going on.

As for the successful bond measure to renovate, seismically retrofit, and improve our school facilities, that effort began in the early 1990s. The measure

passed in 2000 was to finish the job. The cafeteria portion was less than 5 percent of the bond.

The list of factual errors in your article is much longer. Yes, CEL was one player in the overall picture, but there were many participants. If we were to glorify just one, it could be Alice Waters, who has been not only a visionary, but unselfish in her generosity to the Edible Schoolyard.

You did not interview a single garden coordinator or a single food service worker. All your interviews of teachers were only at the Edible Schoolyard. In fact there are fifteen other schools in Berkeley, many of whom struggle every year for adequate funding.

The most telling question is where is Food Systems now. Down to one staff person in Berkeley, no longer active in these meetings. The Center for Ecoliteracy looked for glamour, not the long haul.

If the result of your article was only misinformation, that wouldn't be so bad. But now, CEL will use your article to grab funding which should go to the schools, teachers, garden coordinators, parents, students who are doing the work. True revolution is not about glamour, vainglory, or self-promotion. It is hard work for the long haul.

Sincerely,

Yolanda Huang

Founder, Willard Greening Project

Michael Stone responds:

I had no intention of slighting any of the people who have worked hard and long to improve education and food in the Berkeley schools. I tried to choose words such as "a" (not "the") catalyst, "coalition," and "helped" when describing CEL's role. CEL chose to involve itself in Berkeley partly because so many people there were already working on parts of the problem.

I believe I was also clear in noting that the "revolution" is a work in progress, that CEL has not met all of its goals (and recognizes that some were unrealistic), that progress toward others

has been slow going, and that the future is uncertain.

I could have written the story from any of several perspectives. I focused on CEL because I believe its holistic, systemic formulation of the issues can provide a basis for solving problems where other efforts have failed, and that its analysis of lessons learned can save others time and grief. CEL offers a model for putting systems thinking into practice, providing an intellectual and practical framework that others and I have found particularly helpful.

In a city as famous for fractious politics and turf wars as is Berkeley, it's not surprising that CEL has detractors (including Ms. Huang, a former Food Systems Project employee). CEL's contributions are real. Alice Waters calls its assistance "the catalyst" that allowed the Edible Schoolyard to hire staff and raise other funds. CEL demonstrated that healthy substitutes for junk food are obtainable and affordable. It brought in money that would likely not have come to Berkeley otherwise. It pulled together the seventeen organizations that attracted USDA Community Food Projects funding. It brought in CNN money, and the grant to create a business plan to test the long-term viability of nutritious, affordable meals.

Getting funds for cafeterias and kitchens included at all in the 2000 bond measure was an achievement. The Berkeley superintendent credits CEL for work the district wouldn't have done by itself. I focused on teachers at the Edible Schoolyard because their successes in integrating classrooms, gardens, and kitchens are demonstrations of what can be accomplished.

Given the glacial pace of change in school districts, and the entrenched economic, educational, labor, agricultural, and governmental systems in which school food is embedded, breakthroughs are worth noting. I call making food a district policy rather than the province of an isolated department a reinvention. Rewriting the food service director's job description based on the

food policy and hiring a new director who said she considered it her department's responsibility to implement the policy (a reversal from the previous situation) looked like reinvention to me. (I did attempt to talk to the previous director and other food services staff, but my calls were not returned.)

FSP in Berkeley is down from three staffers to one, since the USDA grant funding it is over, but one of its staff members was hired by the school district to do much the same job (as I wrote, CEL has hoped that the district would assume more responsibility). While continuing to put resources into Berkeley, CEL is also migrating its food systems work to support projects in a "Fertile Crescent Network" in Alameda (Berkeley), Marin, Sonoma, and Yolo counties, with people and organizations who were inspired by FSP in Berkeley.

I wrote that article several months ago. Since then, the school district's finances have worsened. I remain hopeful that the food revolution that CEL, Ms. Huang, and many others have launched will succeed. As she says, it will be hard work over a long time. If those working on it can work together, the seeds sown to date can yield a bountiful harvest.

Praying for some specifics

Larry Dossey ("Measuring the Power of Prayer," Spring 2002) spends a lot of time telling us about studies showing that intercessory prayer works. We should ask some important questions: How many were published? How many were peer-reviewed? How many have been duplicated by unaffiliated researchers? His last paragraph begins "If you look at these studies, you will see...." I'd love to look at the studies, but he refers to only a single one. Worse, it's unpublished.

Dossey attacks researchers who disagree with him—but he doesn't name a single one. Even if his quote of a dogmatic skeptic is correct, that still doesn't invalidate the research and writings of dozens of honest researchers who

ask only for one repeatable, double-blind experiment with clear results.

Perhaps Dossey is correct when he says "consciousness can change the physical world." Perhaps I should pray that *Whole Earth* will try to include references to specific studies, and make an effort to include responsible dissenting opinions on topics such as this one.

I hope you'll consider printing more than just the references—reputable critics (such as Martin Gardner, Victor Stenger, Robert Baker, Nicholas Humphrey, or Jack or Irwin Tesson) would lend balance to the discussion. You can find many of these on the Net, particularly through www.csicop.org.

Even published, peer-reviewed studies don't always tell the whole story. Consider the granddaddy of "intercessory prayer" studies, Byrd's 1988 study of cardiology patients in San Francisco. The study as printed claimed to be double-blind, but Byrd admitted that the study's coordinator knew which patients were in which group, yet was going into wards and collecting data. (For more info, see www.csicop.org/articles/20010810-prayer/index.html).

Mike Morton
Mililani, HI

Larry Dossey responds:

It is refreshing to encounter readers who demand evidence and references from professional journals. It is in the best tradition of authentic skepticism. I consider myself an evidence junkie and a die-hard skeptic. That's why the paper that was the basis for the article was peppered with scientific references. *Whole Earth* clearly specified that the version they published was not a professional paper but "adapted remarks" that were part of a panel discussion. It seems disingenuous to expect extensive citations in a shortened, transcribed talk, or that *Whole Earth* would publish a bibliography.

There is considerable evidence that consciousness can manifest nonlocally, at a distance, in ways that are relevant to health and healing. The peer-reviewed meta- or systematic analyses [at the end

of this letter] examine the ability of individuals nonlocally to insert information into the environment, as in distant intentionality and intercessory prayer.

For a discussion of the legitimacy of prayer research, see my commentary, "Prayer and Medical Science," in *Archives of Internal Medicine*. 2000;160(12):1735-1738 (peer-reviewed). In addition I have written several books exploring the role of consciousness, including intentionality and prayer, in healing. Two of these—*Healing Words* and *Reinventing Medicine* (HarperSan Francisco, 1993 and 1999, respectively)—each contains around twenty-five pages of references, many from peer-reviewed journals in medicine, physics, and other fields.

I've attached a bibliography of 200 studies and articles related to prayer, intentionality, and healing [*email editor@wholeearth.com for a copy—Ed.*], many from peer-reviewed journals, some admirably skeptical, some positive, and others negative.

I have yet to encounter anyone who objects to intentionality and prayer who has actually gone to the trouble of reading all these studies. A typical strategy of critics is to focus on a single flawed study.

With few exceptions, authentic skepticism has yet to find its voice in the evaluation of prayer, intentionality, and healing. Mr. Morton recommends we pay attention to "reputable critics" affiliated with CSICOP, the Committee for the Scientific Investigation of Claims of the Paranormal. CSICOP is just about the last place I'd look for a comprehensive, even-handed criticism of consciousness-related phenomena such as prayer and intentionality. As George P. Hansen says in an in-depth evaluation, "Establishment religion and CSICOP, each with their own means, discourage engagement of the phenomena. Both impose taboos. Religions decree occult dabbling as a sin; CSICOP marginalizes it by ridicule." ("CSICOP and the Debunkers." In *The Trickster and the Paranormal*. Xlibris; 2001.)

CSICOP is famous for its visceral opposition to nonlocal, distant manifes-

tations of consciousness. I suspect this intrinsic hostility limits capacity for valid skepticism. After being involved in this contentious field for over a decade, I can assure Mr. Morton that not everyone who calls himself a skeptic is one.

In 1993 only three of the nation's 125 medical schools had formal courses exploring spirituality and prayer in health and healing. Currently around eighty have such. The primary reason for this transition is that scholars and academicians in medical schools consider the data important and possibly valid. This landmark change in medical education speaks volumes about the legitimacy of this area of research.

References:

1. Astin JE, Harkness E, Ernst E. The efficacy of 'distant healing': a systematic review of randomized trials. *Annals of Internal Medicine*. 2000; 132:903-910. Of 23 studies of distant healing, 57% showed positive results. This is a cautiously positive systematic review.
2. Abbot NC. Healing as a therapy for human disease: a systematic review. *Journal of Alternative and Complementary Medicine*. 2000; 6(2), 159-169. This meta-analysis covers 59 randomized controlled studies, (including 10 dissertation abstracts and 5 pilot studies) of healing in humans up to the year 2000. Of 22 fully reported trials, 10 (45%) suggested significant effects.
3. Braud W, Schlitz M. A methodology for the objective study of transpersonal imagery. *Journal of Scientific Exploration* 1989; 3(1), 43-63. This meta-analysis focuses on electrodermal activity (EDA), a measure of skin resistance that reflects states of tension. Healers have been able selectively to lower and raise EDA, aided by feedback from a meter attached to the healee's skin. In a series of thirteen experiments by William Braud and Marilyn Schlitz involving 271 subjects and 323 sessions, the overall P value was .000023. That is, such results could have occurred by chance only twenty-three times in a million.
4. Benor DJ. Distant healing. *Subtle Energies and Energy Medicine*. 2002; 11(3): 249-264. This is a review of 61 studies of distant healing. Significant effects are demonstrated in controlled trials in humans, animals, plants, bacteria, yeasts, cells in the laboratory, and DNA.
5. Jonas WB. The middle way: Realistic randomized controlled trials for the evaluation of spiritual healing. *The Journal of Alternative and Complementary Medicine*. 2001; 7(1):5-7. This is a positive meta-analysis of studies in distant mental influence on animate and inanimate systems, including distant healing and prayer.
6. Schlitz M, Braud W. Distant intentionality and healing: assessing the evidence. *Alternative Therapies in Health and Medicine*. 1997; 3(6), 62-73. Analyzing 19 experiments in which one person sought to influence another person's electrodermal activity (EDA), they found highly significant effects ($P < .0000007$).
7. Roberts L, Ahmed I, Hall S. Intercessory prayer for the alleviation of ill health. *Cochrane Review*. The Cochrane Library, Issue 3, 2001. www.cochrane.org/cochrane/revabstr/ab000368.htm. This highly conservative evaluation from the *Cochrane Review* finds the data "too inconclusive to guide those wishing to uphold or refute the effect of intercessory prayer on health care outcomes[emphasis added]." However, "[T]he evidence presented so far is interesting enough to justify further study."



NYAEHHH, NYAEHHH

"Goats," said Mike. "The side of San Rafael Hill is covered with goats."

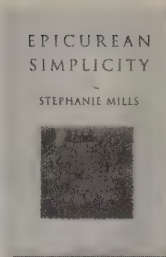
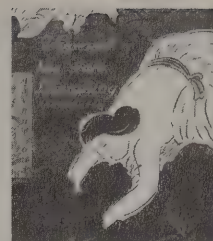
Since our offices are at the foot of the hill, it was a nice day, and we were at the height of our production deadline with not a second to spare, we decided to blow off an hour and go see the goats. (It's the kind of thing we'll never be able to do when our circulation hits 3,000,000 and we all have private offices and company cars.)

Sure enough, there were a bunch of goats—400 of them, according to the City of San Rafael, which hired the beasts from Goats-R-Us to mow the hillside and reduce fire danger on about 20 acres of Scotch broom, thistles, and miscellaneous brush. The goats, which will eat virtually anything that grows, are less expensive than hand crews and more fun to watch. Especially the one that climbed an oak tree and supervised the rest of the industrious herd with an occasional bleat. We returned to the office with fresh commitment and a hankering for a nice green salad. —DB

New Books from *Whole Earthers*

Stephanie Mills's latest book is *Epicurean Simplicity* (2002; Island Press). Mayumi Oda's new one is *I Opened the Gate, Laughing: An Inner Journey* (2002; Chronicle Books). They're both autobiographical, highly personal, and remarkably frank. Stephanie's describes life since moving to rural Michigan to pursue the pleasures (including the sensual pleasures) of life lived in tune with the basics.

Mayumi's, embellished with her distinctive (and sensual) paintings, tells her story from her birth in Japan to life in the US, and her journey back to Buddhism and to art and activism. Do your senses a favor and pick up these books. You'll thank us. —MKS



Reviewers

We decided that it's about time to start giving readers better identification of our book and tool reviewers. Here's the crew for this issue. Those identified by initials only are full-time staff members.

DB: David Bolling, publisher

EP: Emily Polk, associate editor

MKS: Michael K. Stone, managing editor

PW: Peter Warshall, editor at large

SGS: Stephanie Guyer-Stevens, director of development and guest editor of the coffee section of this issue.

Robbie Anderman wrote "West Meets East" (page 67).

Cherine Badawi is *Whole Earth's* editorial intern.

J. Baldwin's pithy articles and reviews of tools, technology, and ecological design have graced our pages for more than twenty-five years.

Napier Collyns, a senior member of the team at Royal Dutch Shell that developed scenario planning, is a cofounder and managing director of the Global Business Network.

Linda Connor is an internationally recognized photographer who teaches at the San Francisco Art Institute.

Joe Eaton is nature editor at www.faultline.org and writes a natural history column for *Terrain*.

Steve Heilig practices medical ethics, health policy advocacy, environmentalism, and book and

music criticism in San Francisco and Marin County.

Herb Hiller was founding editor of *The Ecotourism Society Newsletter* and works as a freelance writer.

Dan Imhoff wrote "On Habit and Habitat" (page 22).

Don Michael, one of the preeminent futurists of the twentieth century, was emeritus professor of planning and public policy at the University of Michigan. He died in 2000.

Mary Nisbet has been growing orchids professionally since 1978. She owns and operates California Orchids in the San Francisco Bay Area.

Mamie Rheingold reviewed software for *Whole Earth* in 1991 (at age 7). She will enroll at Stanford University in September.

Peter Schwartz headed scenario planning for Royal Dutch/Shell in London and directed the Strategic Environment Center at SRI International. He is chair and founder of the Global Business Network.

Lulu Winslow is the daughter of a writer and an artist who were storytellers and skeptics. Her work appears mainly in dangerously outdated software manuals.



Deborah Sweitzer, Point board member Bob Hillman, J. Baldwin, and Paul André Schabracq (left to right) at our publication party for the Spring 2002 issue. The party gathered friends, supporters, staff, and writers and subjects of articles from the issue, and gave us a chance to show off the fancy downstairs part of the Falkirk Cultural Center, a Victorian mansion where we rent the old maids' quarters. We hope to make these parties regular events.

Classified Rates

\$3.00 per word (10-word minimum).
\$2.75 for 3 issues; \$2.50 for 4 issues.
Phone, URL, email, and box numbers
count as single words. Bold-faced
words, add 50¢ per word. Only pre-
paid advertisements will be accepted.
Credit cards are no longer accepted.

Mail ad copy with check or money
order payment to: *Whole Earth*, 1408
Mission Avenue, San Rafael, CA
94901. Ad copy can be faxed to:
415/256-2808. You may also email
your ad to ads@wholeearthmag.com.

Deadline for Fall issue:
August 1, 2002

Back Issue Recycling

COMPLETE SET CQ/WER #1-106. Make offer.
foosounds@aol.com

Books

336-page self-help powerhouse! Dr. Cat's
Helping Handbook. Only \$13.95. See author,
excerpts, easy ordering: www.drcat.org.

Perspectives on living, dying, and the bar-
dos—Gateways Books & Tapes,
www.gatewaysbooksandtapes.com,
free catalog, 800/869-0658.

Green Goods

SCYTHESUPPLY.COM, European scythes,
equipment and instruction. Healthy, mindful,
mowing. www.scythesupply.com.

"Follow close for fresh carcinogens" bumper-
sticker, \$3. Quantity discounts and free catalog
also available, from: BumpersHumpers, P.O.
Box 277, Felton, CA 95018 (no credit cards).

Paloma PH-6DN. Excellent. \$200.
Baggins@well.com

You're rebuilding your MGA and you don't
know where to find some lever action
"dampers," a good radiator, a couple of wind-
shield frames, some rotting but restorable
seats, a dashboard, some Mk II taillight
assemblies, a chromed aftermarket Mk II
grill, and various other bits and pieces too
numerous to name? I've got them, and I want
to get rid of them, for a price. David,
dbkopavi@vom.com or 707/996-4471.

Information

We are planning a city without internal com-
bustion transportation. biketopiaproject.com.

BUILD YOUR OWN SOLAR PANEL—Complete
instructions, illustrated e-book.
www.buildasolarpanel.com.

BUILD A FUEL CELL—e-book of complete
instructions, including printable templates.
www.buildafuelcell.com.

Business Opportunities

Grants to \$1,500 are available to advance
alternative medicine and sustainable devel-
opment. www.chaimcenter.com.

Travel

PERU NATURE LODGES.
www.naturelodges.com,
www.rainforestexpeditions.net, www.worldclasstvl.com. MACHU-PICCHU/INCA
TRAIL TREKKING. 800/771-3100.

Scenic Southeast Ohio Retreat. Main inn,
cabins, 250 acres, trails, sauna, jacuzzis,

'sustainable living' library, discussions.
CARPENTER INN. 800/644-2422.

Real Estate

Peaceful, beautiful 72 wooded acres in
Southern Arizona hills, 5,000 ft. elevation.
Pristine air. Privacy & protection from devel-
opment. Sixty minutes from Tucson between
Sonoita and Patagonia. Equestrian/hiking
trails. Coronado National Forest easement.
Patagonia Nature Conservancy. Star gazing,
wildlife, migratory birds. Environmentally con-
scious Adobe home-1996, 1849 sq. ft. 3BR/
2BTH, 2 fireplaces, whirlpool. Passive solar
elements: SSE orientation, high ceilings,
clerestory windows, thick adobe walls. Central
AC, 2 superb wells, gray water plumbed. View
online/contact: www.annegibson.com
520/455-5235 \$450K firm.

ISSUE 100 THANKS

We are grateful to the following people
for editorial and business assistance with
this issue.

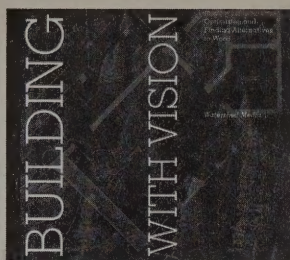
EDITORIAL

Fauzia Assifi, Afghan Women and
Children
Cherine Badawi, for interning beyond
the call of duty
Barrett Brown, Carebridge
Laura Catena, MD
Janet Ginsberg, writer
Dominic DeFazio, photographer
Robert DeSpain, photographer
Barak Good, Frontline producer
Jenna Lowe, WGBH-TV
Christine Peterson, Foresight
Conference
Gunter Pauli, ZERI
Pharmaca, 925 Cole St., SF
Mark Pickthall, photographer
Eric Rasmussen, US Navy
Robert Rice, Smithsonian Migratory
Bird Center
John Russell, photographer
Geoffrey Squier Silver, photographer
Jean Vidler, Green Gathering UK
Sima Wali, Women and Refugees
Program

BUSINESS AND DEVELOPMENT

Chris Anderson, for sharing his vision
and raising the horizon line
Zenobia Barlow, for the gift of the
Four Societies
Gary Bolles, for publishing wisdom

Ana, Olivia, Mandy, and Benga
Bolling, for product testing help
Tyrone Cashman, for history and
guidance
Peter B. Collins, for helping us under-
stand who we are
Peter Coyote, for the last-minute
phone call
Sunita Dutt, for the food and drink
Staff and volunteers of the Falkirk
Cultural Center, for all their help
Frey Vineyards and Russian River
Vineyards, for the fine organic wine
Jonathan Frieman, for continued
inspiration and solid advice
Carol Guyer, for moral support
Diana Hadley, for lots of long-distance
advice
Bob Hillman, for great cheese and talk
Tom Huntington, for enthusiasm and
tactical skill
Jerry Kay, for opening so many doors
Ted Knodel, for helping define the
Whole Earth mission
Peggy Lauer, Fred Gellert Foundation
Pete Lavigne, for connecting *Whole
Earth* to his infinite universe
Malcolm Margolin, for being Malcolm
Tim McGee, for unraveling the kinks
in our computer system
Om Flowers
Ron Pernick, for numerous connections
Danica Remy, for more than we have
room to list
Richard Rockefeller, for kick-starting
our fund drive
Dieter Soltis, for Danica
Phil Stevens, for goal-setting and coaching



"A lens into the future of building."

—Zahid Sardar, *San Francisco Chronicle*

"A rare mix of philosophy, practical information on building materials and practices, and superb visual presentation."

—Alex Wilson, *Environmental Building News*

Watershed Media

BUILDING WITH VISION:
Optimizing and Finding Alternatives to Wood
\$22 at www.watershedmedia.org

hollyhock BREATHE EASY 2002

cortes island, bc

WORKSHOPS • RETREATS • VACATIONS

Spend Time With

- Joan Borysenko • Robert Gass
- Andrew Harvey • Martin Prechtel
- Chloe Goodchild

Free catalog

Also

- Compassion in Action Conference
- The New Global Activism Conference
- Sailing, Kayaking, Yoga

800-933-6339

www.hollyhock.ca

...and more than 70 other world renowned teachers & programs



CELEBRATING 20 YEARS OF EXPERIENTIAL LEARNING

CANADA'S LEADING EDUCATIONAL RETREAT CENTER

Every moment of every day, there's a choice.
Every choice changes the world.
Circle of Life, working with you
to make the difference.



Circle of Life



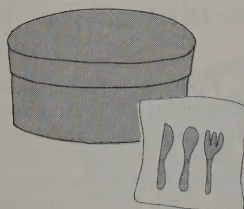
- 16 oz Thermos mug, with drink-thru & leakproof lids, stainless steel interior/exterior - \$30



- 16 oz tumbler, green plastic exterior, steel interior - \$11



- Shopping bags, 100% organic cotton with logo and extra-long straps - \$11
- One Makes the Difference premium kit (shopping bag, supper kit & Thermos mug) - \$48



- Supper kit (100% stainless steel container, hemp napkin & utensil set) - \$12
- One Makes the Difference regular kit (shopping bag, supper kit & tumbler) - \$30

Order from our website, www.circleoflife.foundation.org; call (510) 601-9790; or send a check to Circle of Life Foundation, P.O. Box 3764, Oakland, CA 94609. Include shipping: \$4 for first item; \$2 for each additional item. Cal. residents, add 8.5% sales tax.

READER SERVICE

To SUBSCRIBE: 888/732-6739

INTERNATIONAL: 973/627-5162

WWW.WHOLEEARTH.COM

Subscription rates: \$24 for 1 year (4 issues), \$42 for 2 yrs. **Canada:** \$32 for 1 year, \$55 for 2 yrs. **Other international:** \$39 for 1 year, \$70 for 2 yrs. International subscriptions must be paid in US funds. Mastercard and Visa are accepted.

CUSTOMER SERVICE

Please address subscription inquiries to:
Whole Earth, PO Box 3000,
Denville, NJ 07834-9879.

CHANGE OF ADDRESS

Moving? Send us your old address, new address, and date effective. The US Postal Service is not obliged to forward second-class mail.

Mailing List: Occasionally we make our mailing list available to companies offering goods and services we believe might be of interest to our readers. If you do not wish to be included on those lists, please contact customer service as listed above.

**WHOLE EARTH IS BECOMING SUSTAINABLE, SELF-SUPPORTING
AND MUCH MORE WIDELY READ AS WE EXPAND OUR READERSHIP.
THANKS TO OUR MANY GENEROUS FRIENDS.**

PLEASE JOIN US!

We're grateful for every dollar donated to *Whole Earth* and the people listed below deserve special thanks. *Whole Earth* is published by the Point Foundation, a not-for-profit, 501(c)(3) organization which can accept cash, appreciated stock, equipment and other tangible assets as tax-deductible donations. Please see the donation card inside or direct inquiries to David Bolling, publisher, at 415/256-2800, ext. 225.

Perpetual (\$10,000+)

Grant Abert
Allswell
Marlon Brando
Kimo Campbell
Tyrone Cashman
Center for Ecoteracy
Collective Heritage
Institute
Compton Foundation
Flow Fund
Foundation for Deep
Ecology
Richard & Rhoda
Goldman Fund
Diana Hadley
Alice Eve Kennington
John Larson
Marin Community
Foundation
Alice Michel
Ryan Phelan &
Stewart Brand
Preservation Fund
Richard Rockefeller
Sacharuna Foundation
Sapling Foundation
Windfall Foundation

Angelic (\$5,000+)

Jenifer Altman
Foundation
Jeffrey Bronfman
Crimson Crabtree
Felix Dennis
Jonathan Frieman
Fred Gellert Family
Foundation
Frances Harwood
Kingsley Murphy, Jr.
Institute of Noetic
Sciences
Joshua Mailman

Starfire Foundation

Maniacals (\$1,000+)

Accept and Envision an
Independent Hawai'i
Jaime Lubin Acosta
Cash Adams
Petra Akwai
Jules Alciatore
Denise & Norman Alm
Kathy Archibald
August
Michael Lee Bailey
Bambu Flyingwater
John Perry Barlow
Leona & Bruce Baumgart
Bernard Bildman
Steve Blake
Bernard Bonno
Allen Boorstein
Alex Bornstein
Donna Boyd &
Gene Combs
Mark & Amanda Brady
Jim & Anne Bredouw
Stephen & Julie Briggs
David & Sandra Burns
Andre Carothers
Kelly Celmer
Harvey Chang
Polly Cherner
Continuous Wave
Jeffrey Cook
Joe S. Coulombe
Alasdair Coyne
Carol & Rick Cricow
Harriet Crosby
Brad Croul
Jerry Crutcher
Bob Culley
Henry Dakin
W. Dale, Jr.
Tim Dalmau

Arie de Geus
Lynn Dondero, M.D.
Richard Doty
Robert Dunn
Editora Espaco E Tempo
Ltda.
Jill Oglesby Evans
Hilary Fried
M & L Friedman
Alex Funk
Toni Garrett
Larry Geni
J. Bernard Gilpin
Douglas Gook
David Gotlib
Ed Grover
Eric Haines
Haines Borough Public
Library
Hampshire College Frog
Daniel Hancock
John Hankinson
Stephen F. Haust
Paul Hawken
Johanna Hill
David & Kay Hines
Stephen Hodgkin
Allan Hogle
Harold Hunter
John Hunting
R.W. Hurd
Institute for Intercultural
Studies
Michael O. Johnson
David Johnston
Elizabeth Jones
Mitch Kapor
Richard Kent
Kinswoman
David Kittrell
Kevin J. Kiwak
Francesca Kress
Foundation

Marta Jo Lawrence
Christopher Le Bret
Lawrence Lewis
Kevin Lindsey
Viki List
John Litt, in memoriam
Steve Littlewood
James E. Lovelock
Hunter Lovins
Lucky Loner of the
Lurker Legions
Antione Maamari
Randy Mack
Douglas Martin
Bill Mayben
Jack Mayberry
Luther & Gloria McLeod
Gregory McMillan
& Brenda Martin
Pierce McNally
Arthur Milholland, M.D.
Elise Miller
Russ Molari
Robert Monroe
James Moores
Joseph Murphy, Jr.
Michael Nathan
W.K. Nelson
Anne Norcia
Nothing Matters,
Everything is Important
Joshua Notowitz
Ray Olszewski
Gary Owens
Kevin Patrick
Norman Pease
Tom Peters
Surse Pierpoint
Plant Just One Tree
Julian Price
Ron Pruitt
J.H. Reynolds
Pierre A. Rioux

Marcelo Rocha
Maria Rodale
Hans Nick Roericht
Alexandra Rome
John Romkey
Jonathan Rose
William Rosenzweig
Bret Russell
Jim Sanders
Gail & Jonathan Schorsch
The Schumacher Family
Jim Sells
Suzanne Shafer
Norman & Joanna Sher
Virginia L. Smith
David F.W. South
Mt. Spriggs
Bruce Sterling
Lydia G. Storey
Marion Sweeney
Deborah Sweitzer
Mack Taylor
Jack Tempchin
Nicholas Thaw
Katherine Tremaine
R. Burr Tweedy
Marc Valens
Lawson Valentine
Foundation
Gary Waldron &
Carol Foster
Bob Wallace
Alice Waters
S. Ashley Webb
Betsy Weedon
Samuel Wigley
David Williams
Greg & Pat Williams
Linda Wilson
Gertrude &
Theodore Winsberg
Michael Woo
Kirk Wood

Whole Earth would also like to thank the people listed below for recent donations. Some donor names are still being processed, and will appear in our next issue.

Dan Allison, James Andrews, Joan & Steven Aufrecht, Peter & Lioness Ayres, F. E. Baxter, John Bedenbaugh, Matalena & Edward Berkoff, J.K. Bisbee, Douglas Brandon, Theodore Brockman, David Buchanan, James Buickerood, Jon Burns, Darden Bynum, James Case, Jackson Clark, Rose Conrad, Richard Conti, Jeffrey Cook, Jonathan Cook, R. Critchlow, Malcolm Crosbie, Julie Cross, Carl Dahlke, D. Darkside, Jon Davis, Floyd Dillman, Bob Dodson, Terry Donovan, John Dunkum, Andra Eaks, Michael Earley, George Ehrhardt, Edward Eisenstein, Hanil Ellison, Jill Oglesby Evans, Bruce Fabrick, Tom Ferguson, Pierre & Lalor Ferrari, Jeanne Finan & Tom Eshelman, Roy Fitzgerald, Peter Fleck, E.H. Foreman, David Fox, Ken Fox, Wade Franklin, Murray Friedman, Cynthia & Harry Gewanter, R.B. Gibbons, Barbara & Christopher Granner, Scott Graske, Michael Grigsby, Paul Halter, Raymond Hatchett, Andrew Hayes, Michael Helling, Jerry Hembd, John Hicks, Jeff Hoff, Dale Hooper, Dave Jacke, Frederic Jandrey, Tonia Janzen, David Johnson, Margaret Johnston, John Judge, Cheryl & Raymond Kaiser, Thomas Keck, Patrick Kennedy, William Kennedy, Richard Kent, Louise & Todd Kneeland, Stephen Knudson, James Kostrewa, Paula Kavarik, John Kretzman, Robert Krueger, Stuart & Harriet Lacy, Richard Lahn, Chris Lancaster & Ericka Hofmeyer, Ann Simpson Landesberg, Vanna Lanh, Linda & Ken Lawson, Vincent Leyendecker, Paul Liane, Daniel Lyman, Lynn Marek & Richard Stout, Daniel Mason, G. Kennedy Matthews, Lawrence Maxwell, Thomas McCulloch, Skip Mender, Audrey Milgate, Jonathan Miller, Maxwell Milton, William Morris, Kristin Musgnug, Steven Musick, Stephen Oldroyd, Pancho, Mary Parker, Hans Paul, John Paulson, James Paxton, John Payne, Steve Proudman, Jon Radel, Efram Razumny, Paul Reifsnnyder, Jere Roach, Michael Robertson, Brian Rogers, Gregory Schadt, James Jeffrey Schalles, Pamela Schemer & James Wasley, Stanley Schirmer, Gail & Jonathan Schorsch, Ward Schultz, Greg Sevilla, Elana & Mark Shefrin, Brian Skeelee, David Skinner, Bruce Slater, Donald Smith, Mark Solomon, Carol Sommers, James Stehle, Bob Steigerwald, Michael Strong, Stephen Sweeney, Jay Taylor, Audrey Thompson, Joseph Thompson, David Tiers, Janet & Jim Underwood, Stephen Vago, Timothy Vosta, Jay Walker, Larry Walker, Mary Walker & Richard Terrien, Marvin Weisbord, Joel Wheeler & Evelyn Wheeler, T. Jefferson Whitaker, Brooke Whitted, Kay Wosewick, Robert Wright.



Going natural

Under the sink, in the laundry room, all around the house. With a complete line of environmentally sustainable products, Ecover is the answer to every household cleaning need.

Ecover's non-toxic products work without unnecessary chemicals for spotless cleaning.

It's powerful cleaning, naturally - safer for you, for your home and for the planet we inhabit - with no harsh chemicals, no phosphates and no animal testing.

For more information about Ecover please visit our website www.ecover.com or call us at 800 449 4925.



IN THE FIGHT TO SAVE ENDANGERED SPECIES WE THOUGHT WE'D BETTER INCLUDE OUR OWN.



EARTHJUSTICE
Because the earth needs a good lawyer.

Sure, there are laws on the books designed to protect our children and communities from pollution. But those laws are useless if they are not enforced.

That's where Earthjustice comes in. We're a nonprofit law firm dedicated to upholding the laws that safeguard our environment, wildlife, and public health. Since 1971, Earthjustice has protected millions of acres of land, hundreds of different species, and dozens of communities. All without charge.

Visit our website and see what we're doing to keep our environment safe for all types of wild creatures. Including the screaming, tag-playing ones in your own backyard.

www.earthjustice.org